



Office of the Superintendent of  
Financial Institutions Canada

Bureau du surintendant des  
institutions financières Canada



# Navigating Uncertainty in Climate Change

Promoting Preparedness and Resilience  
to Climate-Related Risks

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OSFI  
BSIF

Canada

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## Navigating Uncertainty in Climate Change

Promoting Preparedness and Resilience to Climate-Related Risks

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# Executive Summary

The Office of the Superintendent of Financial Institutions Canada (OSFI) mandate is to protect the rights and interests of depositors, policyholders, financial institution creditors and pension plan members and beneficiaries while allowing financial institutions to compete and take reasonable risks. OSFI fulfills its mandate by focusing on the safety and soundness of federally regulated financial institutions (FRFIs) and federally regulated pension plans (FRPPs).

The purpose of this discussion paper is to engage FRFIs, FRPPs and other interested stakeholders in a dialogue with OSFI on the risks resulting from climate change that can affect FRFI and FRPP safety and soundness (i.e., “climate-related risks”). OSFI is interested in how FRFIs and FRPPs define, identify, measure and build resilience to climate-related risks. Through this paper, OSFI is also seeking feedback on how it can facilitate FRFIs’ and FRPPs’ preparedness and resilience to these risks.

Climate-related risks are generally categorized as physical, transition and liability risks. These risks are difficult to predict, but will affect most sectors of the economy to some degree. Climate-related risks can affect a FRFI’s or FRPP’s safety and soundness by driving financial risks such as credit, market, liquidity and insurance risks. Climate-related risks can also lead to strategic and operational risks and impact a FRFI’s reputation. Resilience to climate-related risks requires the development of a climate-related risk appetite and strategy, and implementation of governance and risk management practices.

To promote FRFI preparedness and resilience to climate-related risks, OSFI is exploring the role of capital requirements, the supervisory review process and market discipline:



- **Capital requirements:** Exploring whether there are climate-related considerations beyond what is in the existing capital framework that should be considered.
- **The supervisory review process:** Considering whether climate-related risks should be incorporated more specifically into guidance on risk assessment processes, such as the Internal Capital Adequacy Assessment Process and Own Risk and Solvency Assessment, scenario analysis, and stress-testing.
- **Market discipline:** Reviewing the role climate-related financial disclosures can play in supporting OSFI's prudential oversight of climate-related risk management.

OSFI is interested in how FRFIs and FRPPs define, identify, measure and build resilience to climate-related risks.

OSFI is similarly looking at its FRPP guidance, supervisory processes and reporting requirements to determine whether they sufficiently account for climate-related risks.

Responses to this discussion paper may inform the development of future OSFI guidance with respect to climate-related risk management. Subsequent public consultation(s) will precede any proposed future changes to OSFI's regulatory guidance. All consultation questions are listed in Annex A, and stakeholders are asked to submit feedback no later than April 12, 2021, to [Climate-Climat@osfi-bsif.gc.ca](mailto:Climate-Climat@osfi-bsif.gc.ca).



# Introduction

**1.1** The Office of the Superintendent of Financial Institutions Canada ([OSFI](#)) mandate is to protect the rights and interests of depositors, policyholders, financial institution creditors and pension plan members and beneficiaries while allowing financial institutions to compete and take reasonable risks.<sup>1</sup> OSFI fulfills its mandate by focusing on the safety and soundness of federally regulated financial institutions (FRFIs) and federally regulated pension plans (FRPPs).

**1.2** The purpose of this discussion paper is to engage FRFIs, FRPPs and other interested stakeholders in a dialogue on the risks resulting from climate change that can affect FRFI and FRPP safety and soundness (i.e., “climate-related risks”). OSFI is interested in how FRFIs and FRPPs define, identify, measure and build resilience to climate-related risks, and the role OSFI can, and should, play to facilitate their preparedness and resilience to these risks.

**1.3** OSFI invites responses to discussion questions in this paper. While this paper is not an OSFI guideline, perspectives from FRFIs, FRPPs and other interested stakeholders on climate-related risk management may inform the potential need for OSFI guidance relating to these risks. Subsequent public consultation(s) will precede any proposed changes to OSFI’s regulatory guidance.

**Figure 1**

## OSFI’s approach to climate change

OSFI approaches climate change through the lens of its legislative mandate as the prudential regulator and supervisor of FRFIs and FRPPs. Other Government of Canada departments and agencies are responsible for policies that may guide Canada on climate change.

OSFI’s role is to facilitate FRFI and FRPP preparedness and resilience to navigate through the uncertainty related to climate change. This, in turn, contributes to continued public confidence in the Canadian financial system.

<sup>1</sup> Please visit [OSFI’s website](#) to learn more about OSFI’s mandate and how it is applied.



## The structure of this discussion paper

**1.4** Following a brief overview of climate change in Canada, the next three sections of this paper:

- Identify and categorize climate-related risks, and how these risks could impact the safety and soundness of FRFIs and FRPPs;
- Explore ways FRFIs could prepare for, and build resilience to, climate-related risks; and
- Explore ways FRPPs could prepare for, and build resilience to, climate-related risks.

These sections are followed by overviews of climate-related financial disclosure and OSFI's ongoing work on climate-related risks. The paper concludes with an invitation seeking stakeholder views and responses to the discussion questions that appear throughout the paper.<sup>2</sup>

**1.5** While the issues addressed in this discussion paper are broadly relevant to all FRFIs and FRPPs, we recognize that some of the observations and comments may be more relevant to specific types of FRFIs than others, and some more relevant to FRFIs than to FRPPs. We invite stakeholders reviewing this paper to consider how it best applies to their sector or institution.

**The purpose of this discussion paper is to engage FRFIs, FRPPs and other interested stakeholders in a dialogue on the risks resulting from climate change that can affect FRFI and FRPP safety and soundness.**

**Figure 2**

## Climate change through a sustainability lens

Some FRFIs and FRPPs may already consider climate change within the broader context of environmental sustainability, as an element of environmental, social, and governance (ESG) factors. ESG factors are widely discussed, particularly in the investment community, because they can pose financial and reputation risks to investees and their asset holders. A broader discussion on ESG factors may be considered in future discussion papers.

This discussion paper focuses more specifically on climate-related risks that can affect the safety and soundness of a FRFI or a FRPP.

<sup>2</sup> See [Annex A](#) for the full list of discussion questions.

# 2

## Context for Climate Change in Canada

**2.1** [Canada's Changing Climate Report](#) demonstrated that our climate has warmed since 1948 and will continue to warm into the future. According to the report, this warming is effectively irreversible and likely attributable to human influence on greenhouse gas (GHG) emissions. The report also highlights that Canada will continue to experience changes in the intensity and frequency of climate-related events (e.g., wild fires, drought, floods, and severe storms).<sup>3</sup>

**2.2** Evidence suggests that the financial toll is increasing. For example, Canadian insurers paid out over \$1 billion per year in catastrophic insured losses from natural disasters between 2010 and 2019, compared to an average of \$400 million per year for the 26 years prior to 2009.<sup>4</sup>

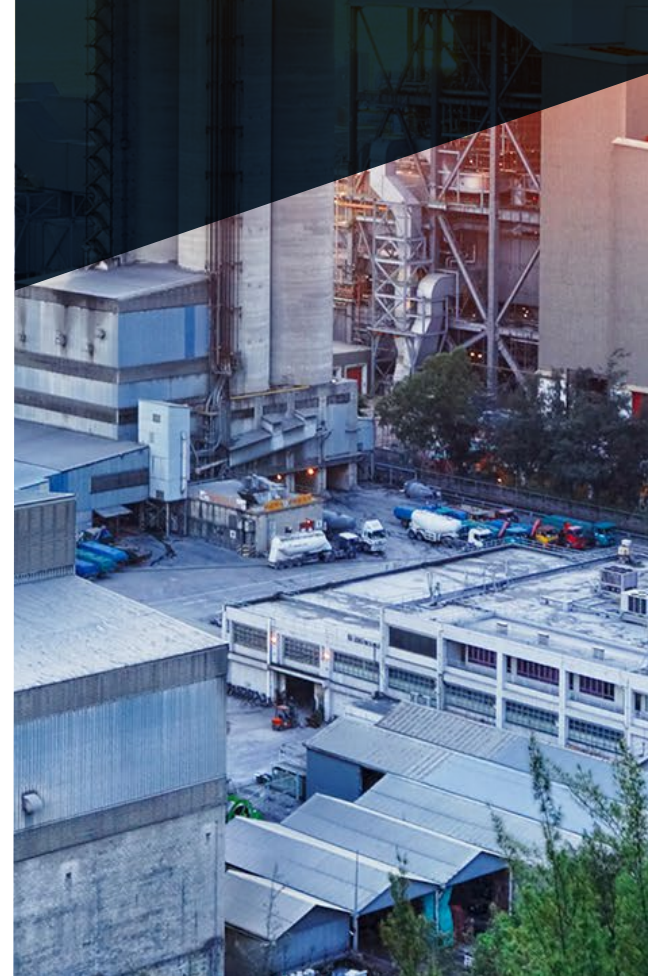
**2.3** Canada signed the Paris Agreement in 2016, along with 194 other countries. This Agreement strengthens the policy efforts across jurisdictions to limit global temperature rise this century, foster climate resilience, lower GHG development, and transition to a lower-GHG economy.<sup>5</sup>

**2.4** Despite the negative impact of climate change, global efforts to limit rising temperatures may also provide economic opportunities. Technological advancements or new markets could lead to enhanced investment opportunities for FRFIs and FRPPs, new insurance products for insurance companies, and/or lending opportunities for deposit-taking institutions (DTIs). The risks associated with these opportunities will need to be prudently managed with other climate-related risks, which are the focus of the next section.

<sup>3</sup> Environment and Climate Change Canada (2019): [Canada's Changing Climate Report](#)

<sup>4</sup> Insurance Bureau of Canada (2020): [Investing in Canada's Future: The Cost of Climate Adaptation at the Local Level](#); Values in 2019 Canadian Dollars

<sup>5</sup> Environment and Climate Change Canada (2016): [The Paris Agreement](#)





# 3

## Climate-Related Risks and their Impact on FRFIs and FRPPs

**3.1** Similar to regulators in other jurisdictions,<sup>6</sup> OSFI categorizes climate-related risks that affect FRFIs and FRPPs as follows:

**Physical risk, which arises from a changing climate increasing the frequency and severity of wildfires, floods, wind events and rising sea levels, among other things.** Climate events could impact FRFIs, by disrupting critical operations when physical assets owned by the FRFI or its third party service providers are damaged, such as real estate and infrastructure. Physical risk can also impact insurance companies through potential increases in insurance claims for property damage in respect of a wide range of assets, including real estate, infrastructure and natural resources. Another impact is that physical risks can threaten the value of FRFIs' and FRPPs' holdings in investments such as commercial real estate. For DTIs, physical risk can impact the collateral posted by borrowers (e.g., damage to real estate, or rendering it uninsurable), or increase the borrowers' credit default risk.

**Transition risk, which stems from efforts to reduce GHG emissions as the economy shifts towards a lower-GHG footprint.** Transition risk can emerge as a result of current or future government policies to reduce emissions, technological advancements, and changes in investor or consumer sentiment. Certain industries may see their business strategies materially disrupted by these developments, leading to reduced profitability, stranded assets,<sup>7</sup> inability to repay loans and/or attract investments, and loss of market capitalization. This in turn can affect employment in the disrupted industries and ripple through the broader economy.

<sup>6</sup> Financial Stability Board (2020): [Stocktake of Financial Authorities' Experience in Including Physical and Transition Climate Risks as Part of Their Financial Stability Monitoring](#)

<sup>7</sup> The OECD adopted Caldecott and McDaniels (2014) definition of stranded assets as those "assets that have suffered from unanticipated or premature write-downs, devaluations or conversion to liabilities": [OECD \(2015\) Divestment and Stranded Assets in the Low-Carbon Transition](#)



## Climate-related litigation may expose FRFIs and FRPPs to various liability risks.

Transition risk can impact FRFIs and FRPPs to the extent that their investment or lending counterparties are impacted by the transition to a lower-GHG economy; and directly in the event the FRFI itself comes to be seen in funding markets as a credit risk by its inability to adjust its business model/strategy to a lower-GHG economy. Climate change can also expose a FRFI to heightened reputation risk; for example, some stakeholders may react negatively if a FRFI is seen as a perpetrator of climate change due to investments in or lending to high GHG industries, while others may react if the FRFI is perceived as no longer supporting its clients in these industries.

### Liability risk, which relates to potential exposure to the risks associated with climate-related litigation.

Climate-related litigation may expose FRFIs and FRPPs to various liability risks. For example, FRFIs and FRPPs may be exposed to tortious claims as perpetrators of climate change or to claims brought by investors, pension plan members or other stakeholders for failing to account for possible risks to GHG-intensive assets. Directors of FRFI Boards and FRPP administrators may also be exposed to liability risk for failing to fulfill their legal/fiduciary duties. Property and casualty insurers may also have exposure through insurance risk related to liability coverage (e.g., for officers and directors of other companies) they have provided.

**3.2** Climate-related risks can be complex and systemic:

**Complex:** The impact of climate change, and in turn climate-related risks, is difficult to predict, in part because the physical impacts of GHGs are hard to predict and can emerge years after emission. The impact of climate-related risks can be further complicated by the extent of interplay between physical and transition risks. For example, while an early climate response may intensify transition risks and temper physical risks, and a delayed climate response may have the opposite effect, the extent of this interplay is not yet well understood. These complexities make climate-related risks difficult to assess, measure and manage using historical data and traditional approaches to risk analysis.

**Systemic:** Almost all sectors of the domestic and global economy will be exposed to some degree of climate-related risk. For transition risk in particular, while the disruption to some sectors is direct, it can also lead to second-, and potentially third-, order economic disruptions to other sectors, which can create instability and lead to severe knock-on effects.

**3.3** Given the uncertain outlook and longer-term horizon associated with climate-related risks, it would be prudent for FRFIs and FRPPs to prepare for economic uncertainty that may persist for some time.

## Ways climate-related risks could affect FRFIs and FRPPs

**3.4** Climate-related risks can drive financial risks such as credit, market, liquidity and insurance risks for FRFIs and FRPPs.<sup>8</sup> They can also lead to strategic and operational risks or reputational damage.<sup>9</sup> Mismanagement of these risks can affect a FRFI's or FRPP's safety and soundness.

**3.5** Figures 3, 4, and 5 each describe an example of ways physical, transition, and liability risk events can drive financial and other risks, leading to potential impact or losses at DTIs, insurance companies, and pension plans, respectively. These examples are illustrative and not exhaustive.

<sup>8</sup> These risks are defined in OSFI's [Supervisory Framework](#) and the [Risk Assessment Framework](#).

<sup>9</sup> These risks can also impact the organizations that FRFIs and FRPPs invest in and lend to.

Figure 3

# Examples of how physical risk can affect DTIs, insurance companies, & pension plans

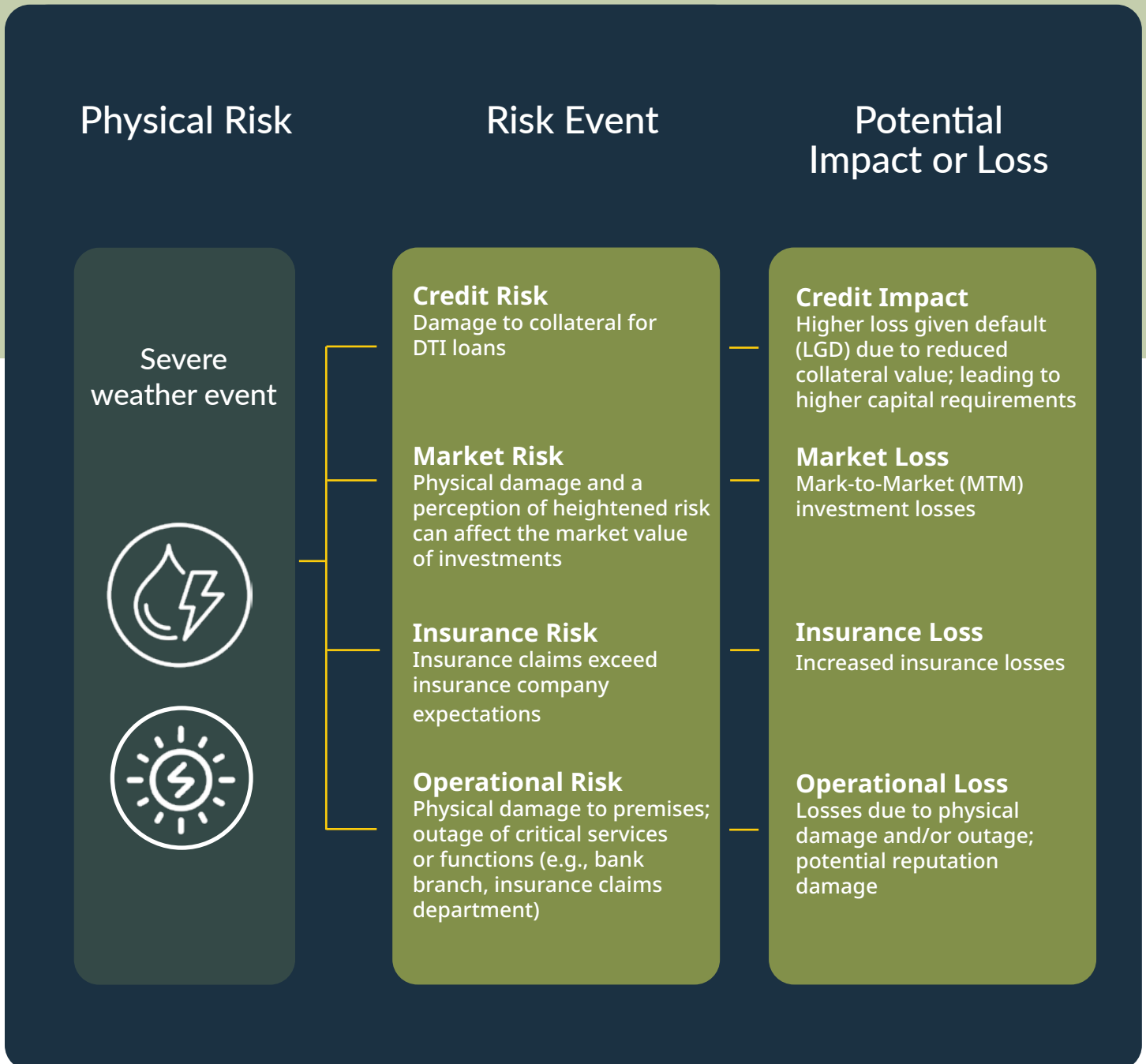




Figure 4

# Examples of how transition risk can affect DTIs, insurance companies, & pension plans

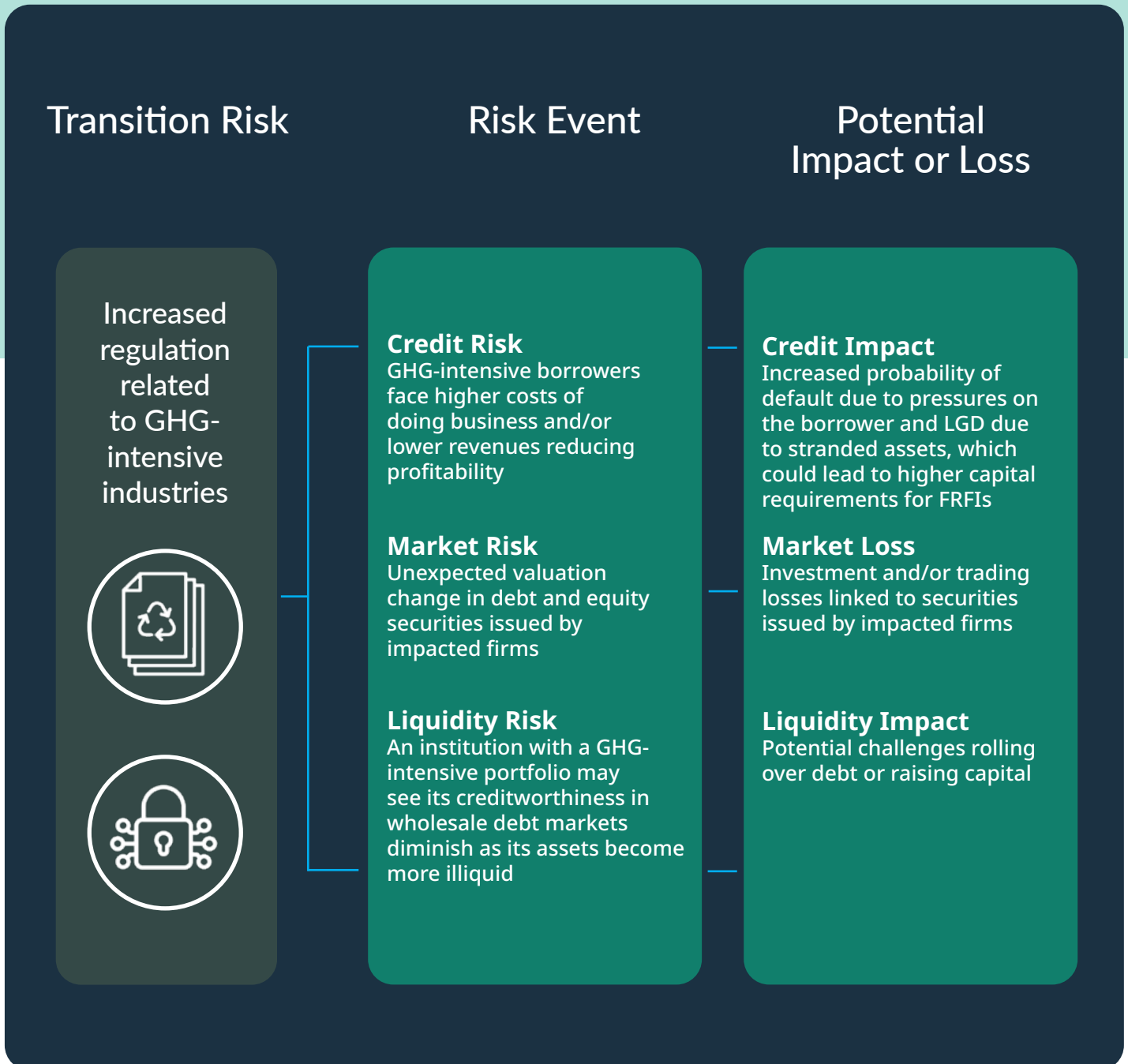


Figure 5

# Examples of how liability risk can affect DTIs, insurance companies, & pension plans



## Managing climate-related risks requires a strategic approach

**3.6** As demonstrated by Figures 3, 4 and 5, climate-related risks will affect a FRFI's or FRPP's business and/or investment strategies, by disrupting the assumptions underpinning those strategies. These risks can lead to serious financial consequences for FRFIs and FRPPs if the exposures are not adequately managed. Figure 6 illustrates the relationship between the identified climate-related risks and a FRFI's or FRPP's safety and soundness.

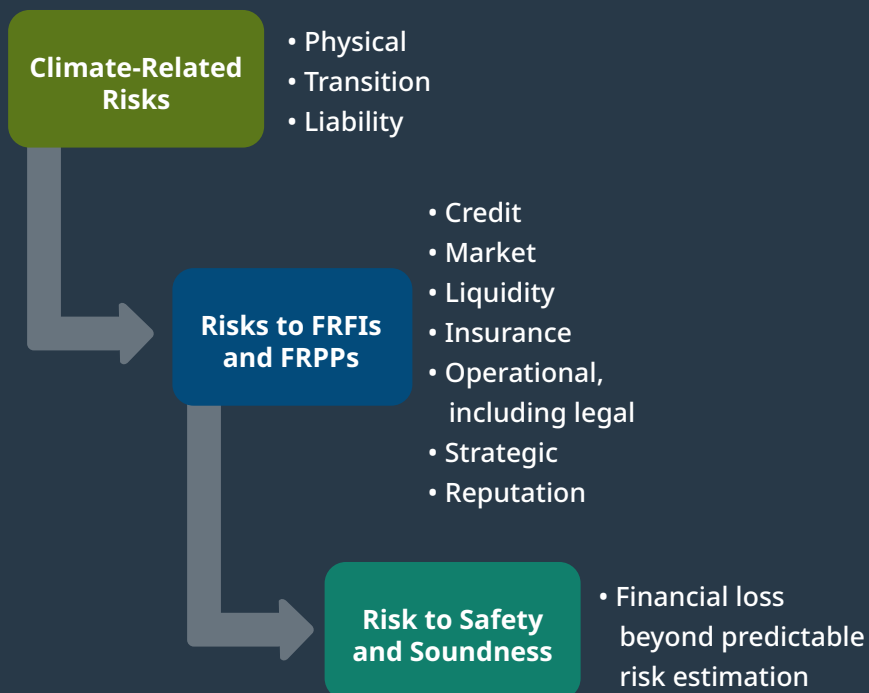
**3.7** Climate-related risks are drivers of other risks for FRFIs and FRPPs, with the potential to affect all asset classes across all portfolios. Consequently, building resilience to these risks requires a holistic approach that includes the development of a climate-related risk appetite and strategy, and implementation of governance and risk management practices that are commensurate with a FRFI's or FRPP's circumstances.

Figure 7 on page 15 illustrates the relationship between developing climate-related risk appetite and strategy, governance and risk management.

Figure 6



### Climate-related risks and their potential impact on safety and soundness



**Climate-related risks are drivers of other risks for FRFIs and FRPPs, with the potential to affect all asset classes across all portfolios.**



Figure 7

## Financial resilience to climate-related risks requires risk appetite and strategy development, governance and risk management



**3.8** The next two sections sets out a number of practices related to risk appetite and strategy, governance and risk management; some that Canadian FRFIs and FRPPs are beginning to implement, and others that regulators in other jurisdictions are including, or considering to include, in their expectations of regulated entities. OSFI seeks feedback based on your experience with these or any other related practices.

### QUESTION 1

What are your views on the characterization of climate-related risks as drivers of other risks? How do climate-related risks affect FRFIs and FRPPs? Do you have other views on the characterization of climate-related risks set out in this paper?

.....

### QUESTION 2

What steps can FRFIs and FRPPs take to improve their definition, identification and measurement of climate-related risks and the impact of these risks?

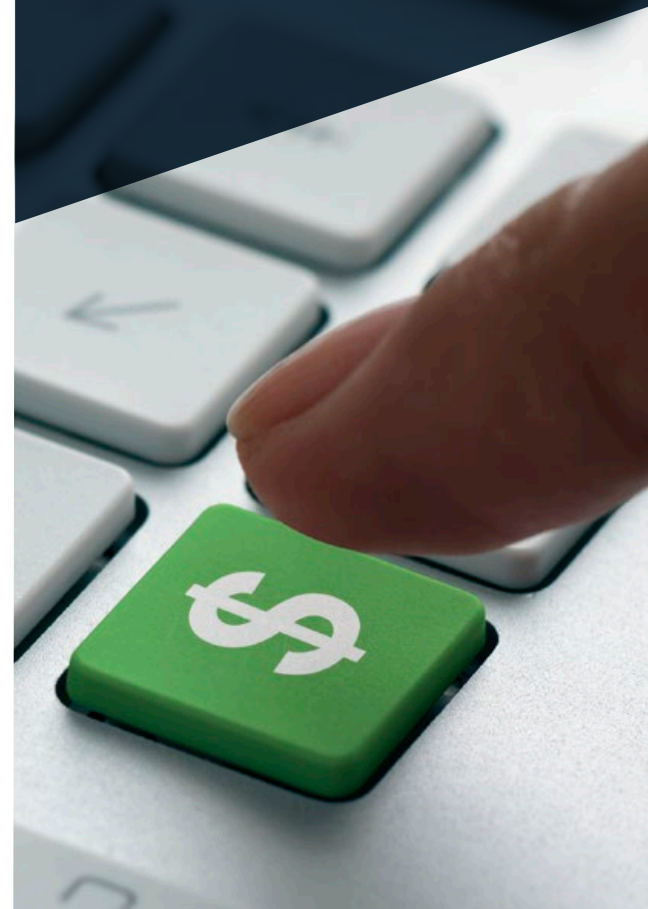
# 4

## Ways FRFIs Could Prepare for, and Build Resilience to, Climate-Related Risks

**4.1** OSFI expects FRFIs to take a forward-looking approach to:

- identifying and understanding how material risks affect the FRFI's business and/or investment strategy, risk profile, and financial and capital management; and
- managing those risks effectively.

Although OSFI's current guidance does not reference climate-related risks specifically, it includes principles and expectations that are relevant to FRFIs' management of these risks.



## Developing a climate-related risk appetite and strategy

**4.2** Building financial resilience to climate-related risks into a FRFI's business operations requires:

- A risk appetite for climate-related risks that aligns to the FRFI's objectives;
- An understanding of the dynamic nature and magnitude of the FRFI's climate-related risk exposures;
- A strategy that adheres to the climate-related risk appetite and is commensurate with the nature, size, complexity and risk profile of the FRFI; and
- Recalibrating the climate-related risk strategy dynamically based on evidence, for continued adherence to the risk appetite.

**4.3** FRFIs that are also investors can benefit from understanding the nature and extent of climate-related risks in their investment portfolios, and how these exposures align with their investment risk appetite. In particular, FRFIs that invest in assets of longer duration may be more susceptible to transition risks due to potential asset repricing over the term of the investment from the transition to a lower-GHG economy.

**4.4** At the same time, climate change may present new business and investment opportunities for some FRFIs. An assessment of those opportunities, in line with the FRFI's objectives and risk appetite, can inform the FRFI's climate-related risk strategy.

### QUESTION 3

Does your organization have, or plan to develop, a climate-related risk appetite and strategy? How does your organization approach setting its risk appetite and strategy?  
.....

**At the same time, climate change may present new business and investment opportunities for some FRFIs.**

## Climate-related risk governance

**4.5** Governance structures, policies or practices may need to be adapted to implement a climate-related risk strategy. Some examples of emerging practices include:

- Designating a Senior Officer accountable for climate-related risk to improve decision making;
- Implementing awareness programs to improve the climate-related risk literacy of decision makers; and
- Linking senior management compensation to specific climate-related risk management objectives of the organization.

**4.6** Similar to other material risks, appropriate policies, procedures, and controls implemented across the FRFI's three lines of defense can contribute to effective climate-related risk management:

**1** lines of business;

**2** risk management, compliance, financial and actuarial functions; and

**3** internal audit.

**4.7** Effective governance also requires including climate-related risk in a FRFI's operational risk management practices. For example, embedding climate-related risk management into a FRFI's business continuity processes and key outsourcing arrangements can foster proactive responses to climate-related business disruptions and broader operational resilience.



## QUESTION 4

What new or adapted governance structures, policies or processes should FRFIs consider to effectively manage a FRFI's climate-related risks?

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## QUESTION 5

What are the key considerations and challenges related to embedding climate-related risk management in a FRFI's three lines of defense?

## Managing climate-related risks

**4.8** A risk management process that defines, identifies, assesses, monitors and manages climate-related risks (and opportunities, as appropriate) is key to informing an effective strategy that aligns with a FRFI's objectives and risk appetite. The results of this process can help inform a FRFI's business and/or investment strategy.

**4.9** Traditional risk management approaches and stress testing tools may not be sufficient for identifying and accounting for a FRFI's climate-related risk exposures due to the uncertain outlook and long-horizon of climate change.

New, advanced or adapted risk analysis tools—such as sophisticated climate-modeling and climate-specific scenario analysis — could help to:

- Identify and assess material climate-related risks;
- Set or evaluate climate-related risk strategy; and/or
- Stress test resilience to economic shocks from climate change (e.g., from physical or transition risk events).

Figure 8

## The COVID-19 pandemic

### Every crisis offers learning opportunities

While many parallels can be drawn between the COVID-19 pandemic and climate change, a key similarity is that both are evolving situations that are likely to be felt over a long period of time and in ways that are, to some degree, foreseeable, yet difficult to quantify with a high degree of certainty.

From a risk management perspective, a key observation emerging from this pandemic is the importance of fit-for-purpose risk modelling. In particular, the COVID-19 pandemic highlighted the need to consider factors in risk models outside organizations' usual data sets (e.g., parametric events) to account for emerging risks. This, in turn, helps to build financial and operational resilience by providing more comprehensive information to support organizations' response to risks with severe and plausible financial and operational implications.

Figure 9

## Climate-related scenario analysis and stress testing

The trajectory for climate-related risks depends on factors such as climate and transition pathways. These risk trajectories can impact a business or investment strategy differently depending on the scenarios considered.

One emerging practice in climate-related risk analysis is developing scenarios (i.e., a series of possible future states) to identify potential exposures to climate-related risks, and assess their implications on an institution's business or investment strategy. Scenarios can also be used to stress test not only the institution's financial resilience to severe but plausible climate-related shocks on individual assets, asset classes or the balance sheet as a whole, but also its operational resilience.

**4.10** Financial risk models (e.g., credit risk or actuarial models) can play an important role in assessing the FRFI's material risk exposures. Generally, these models rely on assumptions and historical data to forecast how risk exposures may behave. For climate-related risks, financial modeling can present a challenge to FRFIs in a number of ways: current assumptions may not capture the impact of climate-related risks on the future direction of the risk exposure; historical loss rates due to climate-related risks are not currently available; and climate data available may be insufficient in granularity.

**4.11** A FRFI's assessment of its material risk exposures, including climate-related risk exposures, can affect its capital adequacy, as assessed through processes such as the [Own Risk and Solvency Assessment \(ORSA\)](#) for insurers, or the [Internal Capital Adequacy Assessment Process \(ICAAP\)](#) for DTIs. Given that risk modelling in the area of climate-related risks continues to develop and evolve, FRFIs may need to consider other ways to assess their material climate-related risk exposures to determine the appropriate level of capital in the interim.

**4.12** Feedback mechanisms such as climate-related risk metrics and reporting can help a FRFI monitor and manage its climate-related risk exposures. Over time, this feedback can support the ongoing recalibration of strategies to align with the FRFI's risk appetite.

## QUESTION 6

Is the description of the data challenges presented by OSFI in this discussion paper complete or are there other data challenges that need to be considered? What is the relative importance you would assign to each of these challenges?  
.....

## QUESTION 7

If your organization has started to include climate-related considerations in its risk management approaches and tools, please share your experience, including the usefulness and challenges associated with climate-related scenario analysis and stress testing. If not, please describe other processes and controls you have introduced to determine the materiality of climate-related risks and manage exposures to these material risks.

**For climate-related risks,  
financial modeling can  
present a challenge to FRFIs  
in a number of ways.**

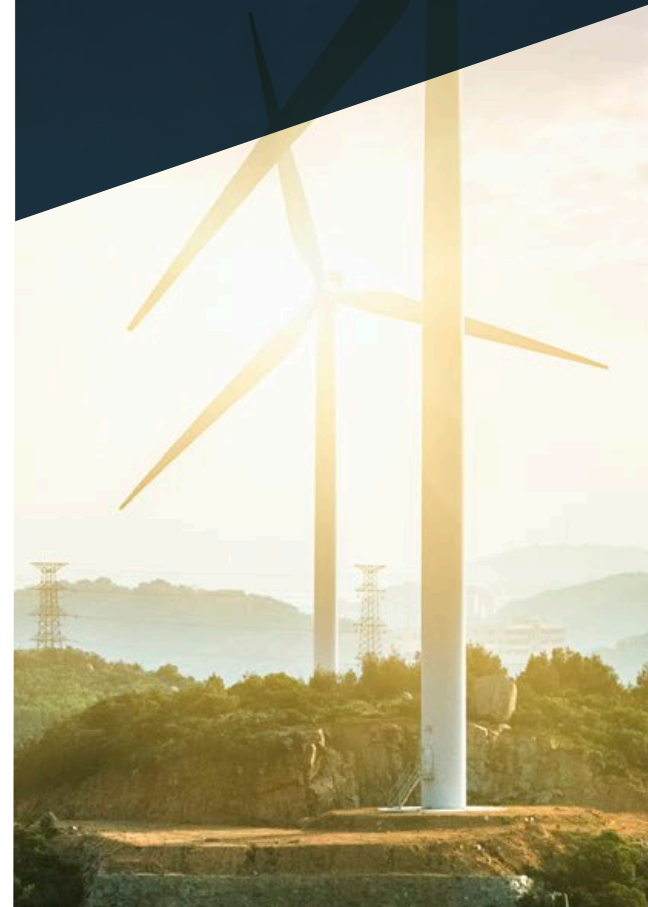
# 5

## Ways FRPPs Could Prepare for, and Build Resilience to, Climate-Related Risks

**5.1** OSFI expects federally regulated pension plan administrators to consider a wide range of factors affecting their ability to prudently administer their pension plans, including risks that could impact long-term investment performance. Although OSFI's current guidance does not reference climate-related risks specifically, it includes principles and expectations that are relevant to FRPPs' management of these risks.

### Developing a climate-related risk appetite and strategy

**5.2** The prudent management and investment of pension plan assets is subject to legislative requirements and is guided by the FRPP's Statement of Investment Policies and Procedures (SIP&P). The FRPP's investment policies and strategies must be consistent with the objectives of the plan and fund, and are expected to evolve, as required, as the investment environment and plan obligations evolve.





**5.3** Climate-related risks, and transition risks in particular, can materially change the investment environment over time. Consequently, it is important for the pension plan administrator to assess how the transition to a lower-GHG economy may impact the FRPP's investment policy and strategy in the longer term.

**5.4** At the same time, climate change may bring about new investment opportunities for FRPPs. As with other potential investments, the FRPP is expected to evaluate any such opportunities in the context of their SIP&P, reflecting the plan's investment objectives and risk appetite.

**5.5** OSFI recognizes that, for FRPPs, climate-related risk strategy is typically considered within the context of assessing how ESG factors can influence long-term investment risk and return prospects, and what pension plan administrators' fiduciary responsibilities are in respect of ESG factors.

## Climate-related risk governance

**5.6** Effective governance enables FRPP administrators to systematically manage material climate-related risks within their investment portfolio. For example, FRPP administrators can implement controls in their investment decision-making processes to assess the alignment of the pension plan's climate-related risk management with its risk appetite.

**5.7** In cases where the FRPP invests in pooled funds and the FRPP administrator does not have control over individual investments held by such funds, the FRPP administrator can assess the pooled funds' consideration of climate-related risk to determine alignment with the pension plan's risk appetite.

## Managing climate-related risks

**5.8** For FRPPs where the pension plan administrator directly invests in assets, they can consider the plan's exposure under a variety of potential climate transition scenarios. For FRPPs where the administrator delegates individual investment decisions to an investment manager, the administrator can seek to include climate-related risk considerations in the investment manager's mandate or choose an investment manager based in part on the manager's approach to climate-related risk.

### QUESTION 8

What are the key considerations for incorporating climate-related risks into the FRPP's Statement of Investment Policies and Procedures (SIP&P)?

.....

### QUESTION 9

For FRPPs where the administrator directly invests in assets, are scenario analysis and stress testing used to assess the pension plan's exposure to climate-related risks? If so, how useful are they? What are some other risk measurement tools that FRPP administrators should consider?

.....

### QUESTION 10

For FRPPs where individual investment decisions are delegated to an investment manager, should consideration be given to climate-related risk management when plan administrators select investment managers? If so, what are the key climate-related criteria for selecting investment managers? If not, why not?

# 6

## Climate-Related Financial Disclosure

**6.1** In Canada, securities legislation requires reporting issuers to disclose material risks to their business, which could include material climate-related risks.<sup>10</sup> These disclosures assist investors in making investment decisions.

**6.2** In 2019, the Canadian Securities Administrators (CSA) released the [CSA Staff Notice 51-358: Reporting of Climate Change-Related Risks](#).<sup>11</sup> While this notice did not create any new legal requirements or modify existing ones, it reinforced and expanded on existing guidance due to rising domestic and international focus on climate change in recent years.

**6.3** Some FRFIs are also voluntarily disclosing climate-related information to external stakeholders. The Financial Stability Board Task Force on Climate-related Financial Disclosures (TCFD) and other standard setting bodies have developed climate-related disclosure frameworks, such as the TCFD Recommendations<sup>12</sup> and guidance for companies to voluntarily adopt such disclosure.

**6.4** In 2019, the Expert Panel on Sustainable Finance (Expert Panel) recommended that the Government of Canada require a mandatory phased “comply or explain” implementation of the TCFD Recommendations for Canadian companies, including financial institutions and pension plans. The Expert Panel further recommended that federally regulated pension plans be required to disclose whether and how climate issues are considered in their SIP&P, including the rationale for any non-consideration.<sup>13</sup> OSFI is closely following the Government of Canada’s response to these recommendations as it could have implications for how OSFI fulfills its mandate.

<sup>10</sup> CSA (2010): [CSA Staff Notice 51-333 Environmental Reporting Guidance](#)

<sup>11</sup> In this CSA Staff Notice, “reporting issuers” excludes investment funds.

<sup>12</sup> Financial Stability Board (2017): [Recommendations of the Task Force on Climate-related Financial Disclosures](#)

<sup>13</sup> Environment and Climate Change Canada (2019): [The Final Report of the Expert Panel on Sustainable Finance](#)



### QUESTION 11

How does your organization currently disclose climate-related risk information? What are the drivers for any voluntary disclosure?

.....

# 7

## OSFI's Ongoing Work on Climate-Related Risks

**7.1** OSFI continues to advance its understanding of climate-related risks relevant to FRFIs and FRPPs. It is also exploring areas of guidance that can facilitate FRFIs' and FRPPs' management of these risks.

### Advancing our understanding of climate-related risks and their impact

**7.2** To advance its understanding of climate-related risks relevant to FRFIs and FRPPs and their potential impact on FRFI and FRPP safety and soundness, OSFI recently completed a preliminary quantification of first round transition risk exposure in FRFIs, which reinforced that:

- the nature and extent of vulnerability varies by industry: DTIs' transition risk vulnerability is mainly driven by their lending to GHG-intensive industries; whereas insurance companies' transition risk vulnerability is mainly driven by life insurance companies' investment portfolios; and
- there is a need for more complete, comprehensive, and consistent portfolio data to enable more robust and comparable analysis, an observation that is consistent with the experience of other jurisdictions.<sup>14</sup> It highlighted the value of a universal climate-related risk taxonomy, as well as the role disclosure could play in enhancing consistency and comparability of exposures between institutions.

<sup>14</sup> Financial Stability Board (2020): [Stocktake of Financial Authorities' Experience in Including Physical and Transition Climate Risks as Part of Their Financial Stability Monitoring](#)



**7.3** Building on this work, OSFI is collaborating with the Bank of Canada on a pilot program to assess financial institutions' potential risk exposures related to a transition to a lower-GHG economy using scenarios that are relevant to Canada.<sup>15</sup> OSFI also contributes to the efforts of the [Network of Central Banks and Supervisors for Greening the Financial System \(NGFS\)](#) to identify and assess data gaps as they relate to financial institution supervision.<sup>16</sup>

**7.4** To help advance a shared understanding of climate-related risks, OSFI participates in international and domestic fora, such as the Basel Committee on Banking Supervision, the Sustainable Insurance Forum, International Association of Insurance Supervisors and the Canadian Association of Pension Supervisory Authorities. OSFI will continue to advance work internally and in cooperation with domestic and international organizations to understand climate-related risk measurement and inform its risk management expectations for FRFIs and FRPPs.

### QUESTION 12

A challenge OSFI has identified is lack of a universal climate-related risk taxonomy. Please describe the climate-related risk taxonomy, if any, your organization has developed or adopted?  
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### QUESTION 13

Given OSFI's role as the prudential regulator and supervisor of FRFIs and FRPPs, what other work do you think OSFI should consider in relation to climate-related risks?

## Exploring the role of OSFI guidance related to climate-related risk management

**7.5** OSFI's current guidance includes principles and expectations that are relevant to FRFIs' and FRPPs' management of climate-related risks. Nevertheless, OSFI continues to explore whether additional guidance or requirements are needed to address distinct climate-related considerations.

**OSFI is collaborating with the Bank of Canada on a pilot program to assess financial institutions' potential risk exposures related to a transition to a lower-GHG economy using scenarios that are relevant to Canada.**

<sup>15</sup> OSFI (2020): [Bank of Canada and OSFI launch pilot project on climate risk scenarios](#)

<sup>16</sup> The [NGFS](#) is a group of Central Banks and Supervisors willing, on a voluntary basis, to share best practices and contribute to the development of environmental and climate risk management in the financial sector.



**7.6** OSFI is exploring the following three areas<sup>17</sup> and the role they could play in strengthening FRFI preparedness and resilience to climate-related risks:

- **Capital requirements:** Capital requirements are established based on evidence of financial risks that institutions face in relation to credit, market and operational risks. The existing capital framework captures climate-related financial risks to the extent that they are recognized in the inputs to the capital regime. OSFI is exploring whether there are climate-related considerations beyond what is already reflected in existing inputs that should be considered in the capital framework.
- **The supervisory review process:** OSFI evaluates the quality of risk management that a FRFI applies to manage its risks and provides feedback to enhance that risk management process. Accordingly, it is exploring whether climate-related risks should be incorporated more specifically into guidance on risk assessment processes, such as the ICAAP and the ORSA, scenario analysis, and stress-testing.
- **Market discipline:** OSFI is considering the role market discipline can play to support its prudential oversight of FRFIs' climate-related risk management. Enhanced market discipline, through climate-related financial disclosures, can reinforce OSFI's regulatory capital requirements and supervisory expectations.

**7.7** Similarly for FRPPs, OSFI is looking at its guidance, supervisory processes and reporting requirements to determine whether they need to be adapted to include distinct climate-related considerations.

## QUESTION 14

What are your views on the relative importance of using (1) OSFI's capital framework, (2) supervisory review process, and (3) market discipline to promote FRFI preparedness and resilience to climate-related risks? What factors should OSFI consider when making changes to the design and approach to each of these areas?

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## QUESTION 15

Are there circumstances where it would be appropriate to factor climate-related considerations in the capital framework beyond what is already reflected in existing inputs in the absence of empirical evidence? What are the pros and cons of such an approach?

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## QUESTION 16

What factors should OSFI consider in designing its guidance, supervision process and reporting requirements to promote FRPP preparedness and resilience to climate-related risks?

<sup>17</sup> In Banking, these three areas are referred to as Pillar 1 (Minimum Capital Requirements), Pillar 2 (Supervisory Review) and Pillar 3 (Market Discipline) of the [Basel Committee on Banking Supervision Basel Framework](#).

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## Next Steps

**8.1** OSFI seeks your views to inform its ongoing analysis, contributions to international fora, and future regulatory approaches in response to climate-related risks. The questions contained in the sections above are designed to enable OSFI to aggregate stakeholder views. You are not required to respond to all questions in your submission. Please identify the questions you are responding to and use paragraph references from this paper, where appropriate.

**8.2** In making a submission to OSFI, you acknowledge that OSFI may incorporate your anonymized feedback in a published summary of consultation findings or similar documents. OSFI may invite stakeholders to participate in further discussions, on a bilateral basis or in a multi-stakeholder forum.

**8.3** Your responses to the discussion questions are requested by April 12, 2021. Submissions and comments should be sent to [Climate-Climat@osfi-bsif.gc.ca](mailto:Climate-Climat@osfi-bsif.gc.ca).





# ANNEX A

## DISCUSSION QUESTIONS

### Climate-Related Risks and their Impact on FRFIs and FRPPs

#### QUESTION 1

What are your views on the characterization of climate-related risks as drivers of other risks? How do climate-related risks affect FRFIs and FRPPs? Do you have other views on the characterization of climate-related risks set out in this paper?

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#### QUESTION 2

What steps can FRFIs and FRPPs take to improve their definition, identification and measurement of climate-related risks and the impact of these risks?

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### Ways FRFIs Could Prepare for, and Build Resilience to, Climate-Related Risks

#### QUESTION 3

Does your organization have, or plan to develop, a climate-related risk appetite and strategy? How does your organization approach setting its risk appetite and strategy?

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#### QUESTION 4

What new or adapted governance structures, policies or processes should FRFIs consider to effectively manage a FRFI's climate-related risks?

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#### QUESTION 5

What are the key considerations and challenges related to embedding climate-related risk management in a FRFI's three lines of defense?

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**QUESTION 6**

Is the description of the data challenges presented by OSFI in this discussion paper complete or are there other data challenges that need to be considered? What is the relative importance you would assign to each of these challenges?

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**QUESTION 7**

If your organization has started to include climate-related considerations in its risk management approaches and tools, please share your experience, including the usefulness and challenges associated with climate-related scenario analysis and stress testing. If not, please describe other processes and controls you have introduced to determine the materiality of climate-related risks and manage exposures to these material risks.

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## **Ways FRPPs Could Prepare for, and Build Resilience to, Climate-Related Risks**

**QUESTION 8**

What are the key considerations for incorporating climate-related risks into the FRPP’s Statement of Investment Policies and Procedures (SIP&P)?

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**QUESTION 9**

For FRPPs where the administrator directly invests in assets, are scenario analysis and stress testing used to assess the pension plan’s exposure to climate-related risks? If so, how useful are they? What are some other risk measurement tools that FRPP administrators should consider?

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**QUESTION 10**

For FRPPs where individual investment decisions are delegated to an investment manager, should consideration be given to climate-related risk management when plan administrators select investment managers? If so, what are the key climate-related criteria for selecting investment managers? If not, why not?

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## Climate-Related Financial Disclosure

### QUESTION 11

How does your organization currently disclose climate-related risk information? What are the drivers for any voluntary disclosure?

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