

January 17, 2022

The Secretary
Ontario Securities Commission
20 Queen Street West
22nd Floor, Box 55
Toronto, Ontario
M5H 3S8
comment@osc.gov.on.ca

Subject: 51-107 – Consultation Climate-related Disclosure Update and CSA Notice and Request for Comment Proposed National Instrument 51-107 Disclosure of Climate-related Matters

The Canadian Institute of Actuaries (CIA) appreciates the opportunity to provide the Canadian Securities Administrators (CSA) with feedback on its October 18, 2021, consultation document on climate-related disclosure.

There is growing discussion on adopting mandatory climate-related disclosures that provide consistent, comparable, and decision-useful information to market participants. The CIA issued a call to action in September 2019 in [Time to Act: Facing the Risks of a Changing Climate](#), asking all levels of government, business leaders, and investors to take immediate action toward meeting the Paris Agreement target. In particular, we asked for:

1. The federal government to oversee the development of national data collection and disclosure related to the financial impacts of climate-related events such as floods, windstorms, and wildfires.
2. All levels of government to require all entities to implement financial disclosure of climate-related risks and opportunities under the Task Force on Climate-related Financial Disclosures (TCFD) by 2021 and for corporate entities to adopt the TCFD framework voluntarily as soon as possible.
3. Investors and business leaders to include environmental, social, and governance (ESG) factors in their decision-making.

Furthermore, on November 25, 2020, the CEOs of Canada's eight leading pension plan investment managers, representing approximately \$1.6 trillion in assets under management, [called on companies and investors](#) "to provide consistent and complete environmental, social, and governance (ESG) information to strengthen investment decision-making and better assess and manage their collective ESG risk exposures." They asked that companies measure and

disclose their performance on material, industry-relevant ESG factors by adopting the Sustainability Accounting Standards Board (SASB) standards and the TCFD framework.

The CIA feedback in this letter draws on the above as well as the key events that have shifted the thinking regarding climate-related risks since the CSA's consultation was released on October 18, 2021.

The CIA congratulates CSA for the significant thought put into its consultation. The paper is very well structured, and the questions posed in Part 10 are comprehensive. The CIA has chosen to respond to questions 4, 5, 7, 9, 10, 14, and 18, which are key to our members' clients and employers.

Comments from the Canadian Institute of Actuaries

Introduction

A few important events have occurred since the release of the CSA consultation on October 18, 2021, that reinforce the need for regulatory bodies like the CSA to provide a framework for improved disclosure of climate-related risks and greenhouse gas (GHG) emissions to investors.

- Whereas the UNFCCC Conference of Parties (COP) 21 (2015) was hailed as a political success by bringing together more than 200 heads of state to sign the landmark Paris Agreement, COP 26 (2021) in Glasgow galvanized efforts by both political and financial leaders.
- The [Glasgow Climate Pact](#) signed at COP 26 binds 200 countries to accelerate action to keep temperature rise below 1.5 C and respond to rising climate impacts.
 - Current [analysis](#) by Climate Action Tracker suggests that current policies put us on course for a 2.7 C world. The most optimistic reading of national commitments before and during the COP 26 summit bends the curve to 1.8 C. The Glasgow Climate Pact states that “limiting global warming to 1.5 C requires rapid, deep and sustained reductions in global greenhouse gas emissions.” This means cutting emissions by 45% by 2030 and net zero by 2050, compared to 2010 levels.
- The [Glasgow Financial Alliance for Net Zero](#) (GFANZ) was launched in April 2021 by Mark Carney, UN Special Envoy for Climate Action and Finance and UK Prime Minister Johnson's Finance Adviser for COP 26, and the COP 26 Private Finance Hub in partnership with the UNFCCC Climate Action Champions, the [Race to Zero](#) campaign and the [COP 26 Presidency](#).
 - GFANZ provides a forum for leading financial institutions to accelerate the transition to a net zero global economy. Members currently include over 450 financial firms across 45 countries responsible for assets of over \$130 trillion.
 - The focus is on broadening, deepening, and raising net zero ambitions across the financial system and demonstrating firms' collective commitments to supporting companies and countries to achieve the goals of the Paris Agreement.

- The IFRS Foundation Trustees announced the formation of a new International Sustainability Standards Board (ISSB) with an office in Montreal to develop a comprehensive global baseline of high-quality sustainability disclosure standards to meet investors' information needs.

And more recently in Canada,

- On December 16, 2021, Prime Minister Trudeau issued a [mandate letter](#) to Minister Freeland, the Deputy Prime Minister and Minister of Finance, in which he asks her to work with provinces and territories to move toward mandatory climate-related financial disclosures based on the TCFD framework and require federally regulated institutions, including financial institutions, pension funds, and government agencies, to issue climate-related financial disclosures and net zero plans.
- In announcing the move, Canada joins a growing list of jurisdictions that are shifting toward mandatory climate reporting for companies and financial institutions.
 - In October, the UK government announced formal plans to introduce legislation requiring mandatory climate-related disclosure.
 - In the US, Securities and Exchange Commission Chair Gary Gensler revealed earlier this year that he is aiming to have proposed rules in place for mandatory climate risk reporting by companies by the end of 2021.

It is against this backdrop of a trend toward greater climate-related risk disclosures aligned with TCFD recommendations that we wish to submit our responses to specific questions asked by the CSA consultation team.

Question 4: Under the Proposed Instrument, scenario analysis would not be required. Is this approach appropriate? Should the Proposed Instrument require this disclosure? Should issuers have the option to not provide this disclosure and explain why they have not done so?

We understand that the CSA has received concerns from stakeholders regarding scenario analysis, including:

- Investors questioning the usefulness, consistency, and comparability of scenario analysis without a standardized set of assumptions.
- Issuers having concerns with the costs associated with developing scenario analysis.

In addition, there are also questions surrounding the appropriate approach and methodology as climate-related scenario analysis may not be perceived as mature at this time.

Initial position

The CIA believes the CSA Proposed Instrument should require reporting issuers to provide a section on scenario analysis aligned with TCFD requirements for the following reasons:

- a) In their [Final Report](#), the Expert Panel on Sustainable Finance recommended a mandatory phased “comply-or-explain” implementation of TCFD recommendations for Canadian companies.
- b) There is an overwhelming body of evidence that GHGs emitted by human economic activities are the main drivers of climate change and increasing evidence that this will lead to damage to many parts of the global economy beyond what is currently observed; thus, the predictive power of historical data to guide future experience is gradually declining and a forward-thinking lens seems a sound approach.
- c) We live in a complex, interconnected world. Non-traditional, forward-looking approaches like scenario analysis are required given the high degree of uncertainty.
- d) Stakeholders’ interest in the Proposed Instrument is a driver of greater disclosures. These stakeholders include:
 - i. regulators like the Office of the Superintendent of Financial Institutions (OSFI);
 - ii. the CEOs of Canada’s eight leading pension plan investment managers;
 - iii. rating agencies; and
 - iv. the Government of Canada as per the December 16, 2021, mandate letter issued to Minister of Finance as mentioned above.
- e) If the CSA does not require reporting issuers to provide a section on scenario analysis, there will be no incentive for issuers to start the journey towards full TCFD disclosure. This will lead to
 - i. gaps in information available to the investment community making it more difficult to manage climate change related risks;
 - ii. missed opportunities for issuers to invest in, and benefit from, a strategic decision-making tool as described below; and
 - iii. difficulties for the CSA to amend its rules in the future to reintroduce scenario analysis.

In our view, it is better to define the endgame now, enshrine it in the rules, and assist issuers through guidance along the journey from qualitative to quantitative scenario analysis.

Inherent value of scenario analysis for strategic purposes

The CIA believes scenario analysis is a common and valuable risk management tool. Its exploratory nature can help to guide strategic decision-making given uncertainty. Issuers could therefore imagine and construct plausible futures (scenarios) that could materially impact their business models. This would be relevant information, not only from a compliance point of view but from a strategic point of view.

- a) The purpose and use of scenario analysis is to test the resilience of the issuer's strategy across various physical, transition and legal scenarios associated with climate change. It is part of a risk management process whose aim is to reduce losses, manage uncertainty and optimize decision-making to improve performance. Extract from the [TCFD Technical Supplement](#):

Scenario analysis is a well-established method for developing strategic plans that are more flexible and robust to a range of future states. It is particularly useful for assessing issues with possible outcomes that are highly uncertain, that play out over the medium to longer term, and that are potentially disruptive. Scenario analysis can help organizations better frame strategic issues; assess the range of potential management actions that may be needed; engage more productively in strategic conversations; and identify indicators to monitor the external environment. Importantly, climate-related scenario analysis can provide the foundation for more effective engagement with investors on an organization's strategic and business resiliency.

It is important to have at least two severe but plausible scenarios, including a transition to a low carbon economy (as recommended by TCFD and also used by the [Bank of Canada/OSFI](#)).

Current challenges associated with scenario analysis

The CIA recognizes that we are at the early stages (late infancy) of assessing and quantifying climate-related risks. There are varying degrees of maturity in developing risk appetite and strategy for climate-related risks by issuers.

The TCFD Technical Supplement identifies challenges with scenario analysis:

- a) The use of climate-related scenario analysis to assess potential business implications of climate change is at late infancy stage:
 - i. Scenarios developed for global and macro assessments of potential climate-related impacts that can inform scientists and policy-makers (like the Intergovernmental Panel on Climate Change and the Network for Greening the Financial System) do not always provide the transparency that would facilitate their use in a business or investment context.
- b) The availability, quality, and granularity of data are not always guaranteed.
- c) The availability of decision-useful data, analytical tools, and skills are other key challenges.

Fostering a glide path approach to scenario analysis

The CIA encourages the CSA to foster a glide path approach from qualitative to quantitative scenario analysis to reflect over a determined period the evolving nature of climate risk regulation, data use and reporting practices, and commonly accepted challenges with scenario analysis.

- a) It would be advisable to foster a glide path approach where firms can move along a continuum, since TCFD and climate-related disclosures are a journey.
 - i. Quantifying the impact of climate risks to issuers using scenario analysis as a tool is the destination, but there are many gradients or maturity levels.
 - ii. Glide path approach may help address immediate cost and capacity concerns.
 - iii. As described in their [Final Report](#), the TCFD allows both qualitative and quantitative scenario analysis: “Scenario analysis can be qualitative, relying on descriptive, written narratives, or quantitative, relying on numerical data and models, or some combination of both. Qualitative scenario analysis explores relationships and trends for which little or no numerical data is available, while quantitative scenario analysis can be used to assess measurable trends and relationships using models and other analytical techniques. Both rely on scenarios that are internally consistent, logical, and based on explicit assumptions and constraints that result in plausible future development paths.”
- b) A solid starting point is qualitative scenario analysis assessment across one or more time frames.
 - i. Issuers would work with information and tools at their disposal and within their own set of constraints, and would improve towards quantitative assessment over time (or a mixture of both).
 - ii. The analysis should be broken down by time horizon: short-, mid- and long-term pathways.
 - iii. A high level of sophistication may not be warranted in the first iteration given the learning curve and given that TCFD is a journey.
 - iv. The CSA could issue guidance defining an initial phase on the glide path by specifying a set of scenarios to be used by issuers in their analysis, akin to a safe harbour of compliance. The guidance should also consider the cost considerations associated with smaller issuers emphasizing an approach that is incremental over time and recognizing the various levels of sophistication of disclosures. The CIA can assist the CSA with this.
- c) There are many dimensions and considerations to scenario analysis, per the TCFD; the aim is not to necessarily model all considerations and dimensions in the first iteration.
 - i. scenarios
 - ii. timeline

- iii. scope
 - iv. climate models and climate data sets
 - v. climate risks
- d) Initial focus should not be about getting the quantitative side right, but more about the exercise of understanding how risk could behave if it materializes and how key drivers of business performance may be (materially) impacted by climate risks specific to each scenario, particularly relevant given unprecedented nature of these risks to financial system.
- i. For instance, pathways of effects or transmission channels is foundational to assessing climate risks; direct and indirect impacts; it all starts with a qualitative or semi-quantitative assessment leveraging risk heat mapping before escalating to a quantitative assessment.
 - ii. Tipping points, non-linear impacts, and cascading effects characterize climate risks.
- e) As data availability and quality evolve and improve over time, and scenarios modelled become more detailed and tailored, and downscaled (higher granularity), it will be possible to place greater reliance on the modelling to forecast probable losses.
- i. It is important to propose an approach that reflects and integrates well with the evolving nature of the landscape.

Recommendation: mandated scenario analysis

The CIA believes:

- a) TCFD compliance is a journey. It is important to pave the way, and anchor future analysis on solid grounds. Qualitative assessment can help in this pathway. Scenario analysis is not a one-off exercise. Instead, it will be replicated over time as new signals and changes in risk drivers occur. There will be integration within a feedback loop.
- b) Issuers of securities have an important role in providing decision-useful, relevant, material information to support the Canadian financial sector in enhancing the disclosure of climate-related risks.
- c) The aim of the CSA consultation is to ensure securities regulations maintain relevance in today's world and keep up with global standards. The practice of scenario analysis is young, but TCFD provides room for disclosures appropriate to the issuer's capacity and progress.
- d) Overall, issuers need to build their climate scenario analysis capability.
 - a. Without scenario analysis the disclosures would lose a lot of their impact and it would be difficult to bring it back in later on.

- b. Legitimate concerns that these disclosures would simply become siloed out as an extra bit of regulatory burden and administrative paperwork, rather than being integrated into the company and building climate-resilient strategy.
- e) The CSA could issue guidance defining an initial phase on the scenario analysis glide path by specifying a set of scenarios to be used by issuers in their analysis, akin to a safe harbour of compliance. The CIA can assist the CSA with this. A good place to start could be the newly released report by the Bank of Canada/OSFI, [Using Scenario Analysis to Assess Climate Transition Risk](#).

Question 5: The TCFD recommendations contemplate disclosure of GHG emissions, where such information is material.

The Proposed Instrument contemplates issuers having the option to disclose GHG emissions or explain why they have not done so. Is this approach appropriate?

The CIA believes the disclosure of the three levels of GHG emissions¹ should be mandatory; however, similar to our comments on Scenario Analysis, we believe complete disclosure is a journey.

Several of the anticipated benefits associated with providing GHG emissions disclosure are addressed in Questions 9 and 10. It is critical to be able to establish a baseline of GHG emissions to build a net zero road map with meaningful targets over a defined time horizon. Failure to assess and disclose emissions could limit strategic decision-making.

We are conscious of differences with the level of reporting of Scopes 1, 2, and 3 across issuers, as well as issues with comparability of disclosures between issuers. However, reporting standards like the GHG Protocol acknowledge that data quality can vary. Estimation techniques are provided, with the aim that data quality and data availability improve over time.

Potentially, increasing adoption of a GHG emissions reporting standard like the GHG Protocol by issuers, the development and refinement of industry-specific GHG emissions benchmarks and increased auditing capabilities could reduce over the long term some of the current challenges.

We are also aware that obtaining timely, accurate, and reliable GHG emissions information from issuers continues to be a challenge.

¹ The [Greenhouse Gas Protocol](#) has defined three scopes of emissions:

- Scope 1 emissions are direct emissions from company-owned and controlled resources. In other words, emissions released into the atmosphere as a direct result of a set of activities, at a firm level.
- Scope 2 emissions are indirect emissions from the generation of purchased energy, from a utility provider. In other words, all GHG emissions released in the atmosphere, from the consumption of purchased electricity, steam, heat, and cooling.
- Scope 3 emissions are a consequence of the activities of the company, but occur from sources not owned or controlled by the company. Some examples of Scope 3 activities are extraction and production of purchased materials, transportation of purchased fuels and use of sold products and services.

- The information is mostly based on corporate self-reported data and/or estimations based on black box, third-party “proprietary” methodologies.
- We should be mindful of potential unintended consequences for the value chain of climate data and disclosures:
 - Poor quality data originating from down-chain actors like issuers is likely to carry through and “pollute” the upper stream value chain, namely stakeholders like (institutional) investors, lenders, and regulators, among others.

At the very least, there should be consistency between the requirements on scenario analysis and GHG emissions disclosures.

- GHG emissions and forward-looking targets are one of many necessary inputs to conducting meaningful scenario analysis

Finally, in making its final decision, the CSA should also take stock of the surrounding policy landscape in Canada, and abroad, around GHG emissions disclosures and net zero road maps.

- As in the [mandate letter](#) to Minister Freeland: “Supported by the Minister of Environment and Climate Change, work with provinces and territories to move toward mandatory climate-related financial disclosures based on the Task Force on Climate-related Financial Disclosures framework and require federally regulated institutions, including financial institutions, pension funds and government agencies, to issue climate-related financial disclosures and net zero plans.”

As an alternative, the CSA is consulting on requiring issuers to disclose Scope 1 GHG emissions. Is this approach appropriate? Should disclosure of Scope 1 GHG emissions only be required where such information is material?

The CIA believes mandating only Scope 1 GHG emissions disclosure is not sufficient for institutional investors to strengthen investment decision-making and better assess and manage climate-related risk exposures. It is also not consistent with the government’s efforts to achieve its 2030 climate goals and accelerates the transition to a net zero economy no later than 2050.

GHG emissions can be a useful measure that informs the assessment of an issuer’s exposure to transition risk under various scenarios of future carbon pricing.

We also know that climate-related risks can impact issuers beyond their own operations and assets, and include impacts to suppliers and customers, which would not be captured under Scope 1 emissions only.

Stakeholder engagement is a key element of many institutional investors.

- GHG emissions disclosures beyond Scope 1 may facilitate and support such engagement across the value chain of climate disclosures and actors.

Should disclosure of Scope 2 GHG emissions and Scope 3 GHG emissions be mandatory?

Yes for Scope 2.

Yes also for Scope 3 but at an early stage, it could be based on estimates. Many publicly listed companies in Canada do not yet provide any scope emissions data so Scopes 1 and 2 should be the primary focus.

Since Scope 3 emissions are a consequence of the activities of the issuer but occur from sources not owned or controlled by the issuer, it would be important to integrate Scope 3 quantification with scenario analysis. Some examples of Scope 3 activities are extraction and production of purchased materials, transportation of purchased fuels and use of sold products and services.

Similar as for scenario analysis, the CSA could address the cost considerations associated with smaller issuers and emphasize an approach that is incremental over time, recognizing the various levels of sophistication of disclosures.

For those issuers who are already required to report GHG emissions under existing federal or provincial legislation, would the requirement in the Proposed Instrument to include GHG emissions in the issuer's AIF or annual MD&A (if an issuer elects to disclose these emissions) present a timing challenge given the respective filing deadlines? If so, what is the best way to address this timing challenge?

We do not have any specific comments other than to say that, in our opinion, institutional investors are more concerned about the trends in GHG emissions numbers for an issuer as opposed to a specific point in time estimate.

Question 7: The Proposed Instrument does not require the GHG emissions to be audited. Should there be a requirement for some form of assurance on GHG emissions reporting?

The CIA believes that Institutional Investors would need assurance about the quality of the data and the satisfaction that the data are comparable from one issuer to the other based on a recognized global standardized framework like the GHG Protocol.

Just like financial results of companies need to be audited beyond a certain threshold, the same should apply for GHG emissions reporting.

Question 9: What climate-related information is most important for investors' investment and voting decisions? How is this information incorporated into these decisions? Is there additional information that investors require?

For institutional investors and their asset managers, incorporating climate change related risk into the investment decision making and risk management process relies on the availability of Scopes 1 and 2 GHG emissions data. Scope 3 is desirable but should not be the immediate focus. Many publicly listed companies in Canada do not yet provide any scope emissions data so that should be the focus.

The other important piece of information is the issuers' goals with respect to emissions reduction or any interim goals during the transition to a net zero emissions target including investment in renewable energy.

The above information about current GHG emissions and transition goals is important to institutional investors and their asset managers for the following reasons:

- To assess the impact of various scenarios of carbon pricing, energy costs or other zero-emissions goals on the earnings of an issuer and operating liquidity.
- To gauge the market appetite/pricing for securities from issuers who are heavy emitters or are less actively transitioning to net zero.
- To assist in establishing institutional investors' own net zero goals and transition goals.
- To keep track of trend in emissions by issuers from year to year.
- To support shareholder engagement activities.
- To compare data between companies in the same sector or between sectors.
- To meet the requirements of the UN Principles for Responsible Investment to which many asset managers are signatories and committed to build a more sustainable financial system.
- To be able to meet the requirements of a screening policy as part of a Responsible Business Conduct Policy.

The additional information institutional investors may require includes:

- Assurance about the quality of the data and the satisfaction that the data are comparable from one issuer to the other based on a recognized global standardized framework like the GHG Protocol.
- Information about carbon sequestration.

Question 10: What are the anticipated benefits associated with providing the disclosures contemplated by the Proposed Instrument? How would the Proposed Instrument enhance the current level of climate-related disclosures provided by reporting issuers in Canada?

Question 9 already touched on the anticipated benefits of the Proposed Instrument (with additional recommendations):

- a) Better climate change related risk identification, quantification, and management for issuers and institutional investors.
- b) Better strategic decision making by issuers' management.
- c) More information for institutional investors to:
 - Integrate climate change related risk in investment decision process;
 - engage with issuers on net zero goals and transition goals; and

- manage their own net zero goals and transition goals.
- d) Contributes to the government’s efforts to achieve its 2030 climate goals and accelerates the transition to a net zero economy no later than 2050.
- e) Contributes to the success of the Glasgow Climate Pact signed at COP 26 binding 200 countries including Canada to accelerate action to keep temperature rise below 1.5 C.
- The Glasgow Financial Alliance for Net Zero (GFANZ) provides a forum for leading financial institutions (including several Canadian banks) to accelerate the transition to a net zero global economy.

Question 14: We have provided guidance in the Proposed Policy on the disclosure required by the Proposed Instrument. Are there any other tools, guidance or data sources that would be helpful in preparing these disclosures that the Proposed Policy should refer to?

Although the CIA is not in a position to recommend specific tools, guidance, or data sources to use, we can highlight some general principles such as:

- use of multiple data sources when available;
- reliance on multiple climate models and climate scenarios, given the high uncertainty regarding the future; and
- the importance of expert judgment given the large real-world data gaps that exist.

In fact, all models have limitations, and transparency around the use of data, assumptions, and parameters should be disclosed.

The following excerpt from [*Risk management – an actuarial approach*](#) by the Institute and Faculty of Actuaries in the UK expands on the above points:

“By gathering as much robust and relevant data/information as possible on the risks that exist, they can build up a more accurate picture of the drivers for risks and their likelihood and potential impact. This then allows for more informed choices about which risks are more or less important to study further. The more we can prioritise the risks that really matter to the stakeholders under consideration, the better the decision-making process will be for managing those risks.

The model development process requires as much real-world data as possible, but often this can be limited either because the system has little history or very few examples have been sufficiently studied. Expert judgement, from actuaries and/or subject specialists, is needed to interpret this limited data.

In order to build an accurate and nuanced view, it is important to gather a wide range of interpretations of historic data and to consult a number of experts about the possible patterns of future experience.

However, in some cases lack of data - in what is a relatively new area - may restrict the scope for modelling. Adaptability is particularly important for measuring climate risk,

which is changing rapidly and affects different organisations in different ways. This rapid development of the risk means that greater reliance is placed on human judgement, rather than available data, to determine appropriate modelling assumptions. This brings a danger that personal biases may lead to a failure to assess risk levels appropriately. With this in mind, working with more than one model may be a valid approach to generate helpful climate risk narratives.

Continuing studies of occurrences and other data may indicate increasing levels of risk, though careful analysis and comparison with other data sources is necessary to distinguish these from random or temporary variations.”

As previously mentioned, the CIA issued a call to action in September 2019 [Time to Act: Facing the Risks of a Changing Climate](#), asking the federal government to oversee the development of national data collection and disclosure related to the financial impacts of climate-related events such as floods, windstorms, and wildfires. We continue to call for a national initiative of climate data collection to assist in the identification, quantification, and management of climate-related risks to the financial sector and the Canadian public.

On November 30, 2016, the CIA and three other organizations representing the actuarial profession in Canada and the US launched the [Actuaries Climate Index](#) (ACI), a quarterly measure of changes in extreme weather events and sea levels.

The ACI is an educational tool aimed at informing actuaries, policy-makers, and the public about climate trends and some potential impacts of a changing climate in Canada and the US. The index measures the frequency of extreme weather and the extent of sea level change based on six components:

1. high temperatures
2. low temperatures
3. heavy precipitation
4. drought (consecutive dry days)
5. high wind
6. coastal sea level

Question 18: In its comment letter to the IFRS Foundation’s consultation paper published in September 2020, the CSA stated that developing a global set of sustainability reporting standards for climate related information is an appropriate starting point, with broader environmental factors and other sustainability topics to be considered in the future. What broader sustainability or ESG topics should be prioritized for the future?

The CIA commends the development of a global set of sustainability reporting standards for climate-related information, and generally agrees with a phased approach for integrating other relevant factors over time. As a starting point, it would be worth considering the various dimensions of environmental risks and then considering their ramifications beyond the “E” and into the “S” and the “G” domains, given their interconnectedness.

First, in recent years, environmental risks have dominated top global risks from the World Economic Forum and can represent a major driver of financial risk. When developing climate-related reporting standards, it would be advisable to consider a holistic range of critical risk drivers, for example encompassing extreme weather events, climate change adaptation and mitigation, pollution, and waste, as well as biodiversity loss, land use, and natural capital.

Indeed, an approach that would integrate an issuer's contribution to climate change and environmental degradation, as well as the effect of climate change and environmental degradation, and any resulting transition-related factors and climate change response from key stakeholders, onto the issuer would provide a more holistic assessment.

Second, while climate-related risks are interconnected, these may also impact other key ESG issues beyond the "E." As such, a sound approach would be to recognize these interdependencies in the development of reporting standards. For instance, one of the impacts of climate change will be on the "S" – population health – reflected, for issuers, through human capital, labour productivity, health, and safety, and in some cases, work-related accidents. Another example is the competing demand for access to limited natural resources and other raw climate-sensitive materials, which could impact issuers and the surrounding communities, for example through a social license to operate. While these examples will be specific to some sectors or geographies, they are presented for illustrative purposes only to highlight interdependencies between climate and social-related factors. A similar approach could be adopted for the "G," again emphasizing the potential interactions between climate-related factors and board composition and/or executive compensation, for example.

Third, while a focus on risks is necessary, it would also be important to include reporting standards on climate-related and other wider ESG-related opportunities to provide a more complete view.

As previously mentioned, following the release of the consultation paper, the IFRS Foundation Trustees announced at COP 26 the formation of a new International Sustainability Standards Board (ISSB) with an office in Montreal to develop "high quality, transparent, reliable and comparable reporting by companies on climate and other environmental, social and governance (ESG) matters" to meet investors' information needs.

The CIA believes that actuaries can play a useful and important role in recognizing the risks from climate change, notably in the areas of physical risks, transition risks, and liability risks. The CIA also believes that actuaries can work well with other professionals on the identification, quantification, and mitigation of climate-related risks. We already have key relationships with other Canadian regulators including OSFI, the *Autorité des marchés financiers* (AMF) and the Canadian Association of Pension Supervisory Authorities (CAPSA).

The CIA appreciates the opportunity to provide these comments, and we would welcome further discussions with your team.

If you have any questions, please contact Chris Fievoli, CIA Staff Actuary, Communications and Public Affairs, at 613-656-1927 or chris.fievoli@cia-ica.ca.

Sincerely,

A handwritten signature in black ink, appearing to be 'JF' followed by a flourish and a period.

Jacqueline Friedland, FCIA
President, Canadian Institute of Actuaries

The Canadian Institute of Actuaries (CIA) is the qualifying and governing body of the actuarial profession in Canada. We develop and uphold rigorous standards, share our risk management expertise, and advance actuarial science for the financial well-being of society. Our more than 6,000 members apply their knowledge of math, statistics, data analytics, and business in providing services and advice of the highest quality to help ensure the financial security of all Canadians.