ESG CONSIDERATIONS IN CANADIAN PROVINCIAL AND MUNICIPAL BONDS

JULY 2023

An investor initiative in partnership with UNEP Finance Initiative and UN Global Compact

THE SIX PRINCIPLES

PREAMBLE TO THE PRINCIPLES

As institutional investors, we have a duty to act in the best long-term interests of our beneficiaries. In this fiduciary role, we believe that environmental, social, and governance (ESG) issues can affect the performance of investment portfolios (to varying degrees across companies, sectors, regions, asset classes and through time). We also recognise that applying these Principles may better align investors with broader objectives of society. Therefore, where consistent with our fiduciary responsibilities, we commit to the following:

1 We will incorporate ESG issues into investment analysis and decision-making processes.

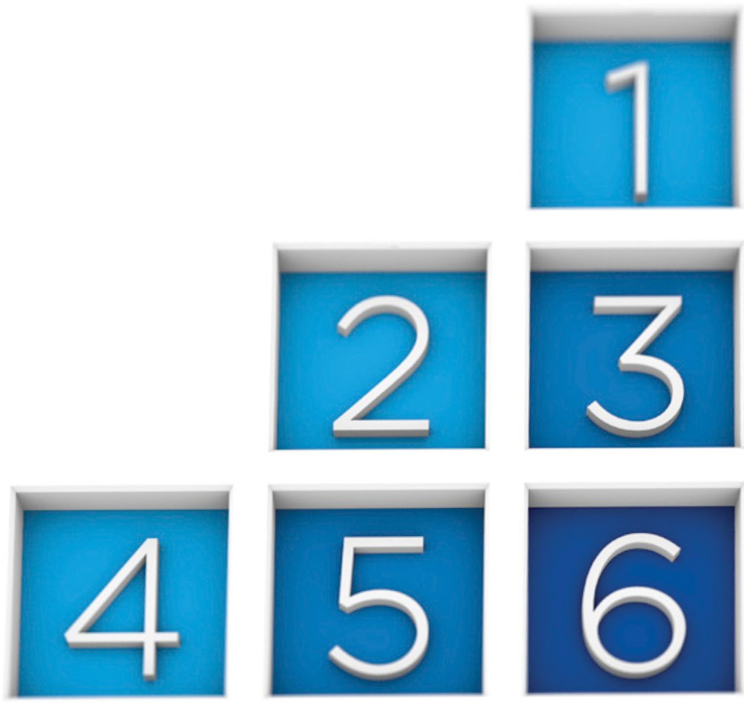
2 We will be active owners and incorporate ESG issues into our ownership policies and practices.

3 We will seek appropriate disclosure on ESG issues by the entities in which we invest.

4 We will promote acceptance and implementation of the Principles within the investment industry.

5 We will work together to enhance our effectiveness in implementing the Principles.

6 We will each report on our activities and progress towards implementing the Principles.



PRI's MISSION

We believe that an economically efficient, sustainable global financial system is a necessity for long-term value creation. Such a system will reward long-term, responsible investment and benefit the environment and society as a whole.

The PRI will work to achieve this sustainable global financial system by encouraging adoption of the Principles and collaboration on their implementation; by fostering good governance, integrity and accountability; and by addressing obstacles to a sustainable financial system that lie within market practices, structures and regulation.

CONTENTS

INTRODUCTION

The materiality of environmental, social and governance (ESG) factors in the Canadian provincial and municipal bond market can be significant. Many Canadian provinces are reliant on, and to some degree responsible for, economic activities involving natural resources, such as fossil fuel extraction, agriculture and mining. At the same time, for those investors pursuing sustainability outcomes, Canadian provinces and municipalities, like sub-national governments in other countries, fund infrastructure and public services that by their nature have a tangible relationship with the environment and society.[1]

This report offers a starting point for framing how ESG considerations can affect risk and return in Canadian provincial and municipal bonds, and how bondholders can consider working towards sustainability outcomes through investing in this market. It covers the following topics:

- An overview of the Canadian provincial and municipal bond market. Notable features include a high degree of participation from non-Canadian investors, and concentration of issuance in a few provinces.
- How ESG factors pose risks to bond returns. Environmental risks are particularly pertinent for many issuers given the heavy weighting of natural resource-intensive sectors within many local economies.
- How investments in this market can contribute to sustainability outcomes. Some provinces and municipalities have issued use-of-proceeds labelled bonds to earmark funding for specific environmental or social projects. Several examples of labelled issues are provided.

This report is aimed primarily at investors and other financial market participants working in the Canadian provincial and municipal bond market.

It follows a webinar the PRI held in 2022, Tackling ESG factors in Canada's provincial and municipal bonds, which brought together Saad Qazi from Manulife Investment Management, Anthony Tia with the City of Vancouver and S&P Global Ratings' Bhavini Patel. The PRI thanks these participants for contributing their insights to the webinar, which helped in the formation of this paper, and in particular Saad Qazi for his contributions to the report.

This report also links to work the PRI has done in the US municipal bond market, with the publication of ESG integration in sub-sovereign debt: the US municipal bond market and The thematic ESG approach in US municipal bonds.

1 For a definition of sustainability outcomes, see PRI Reporting Framework glossary

OVERVIEW

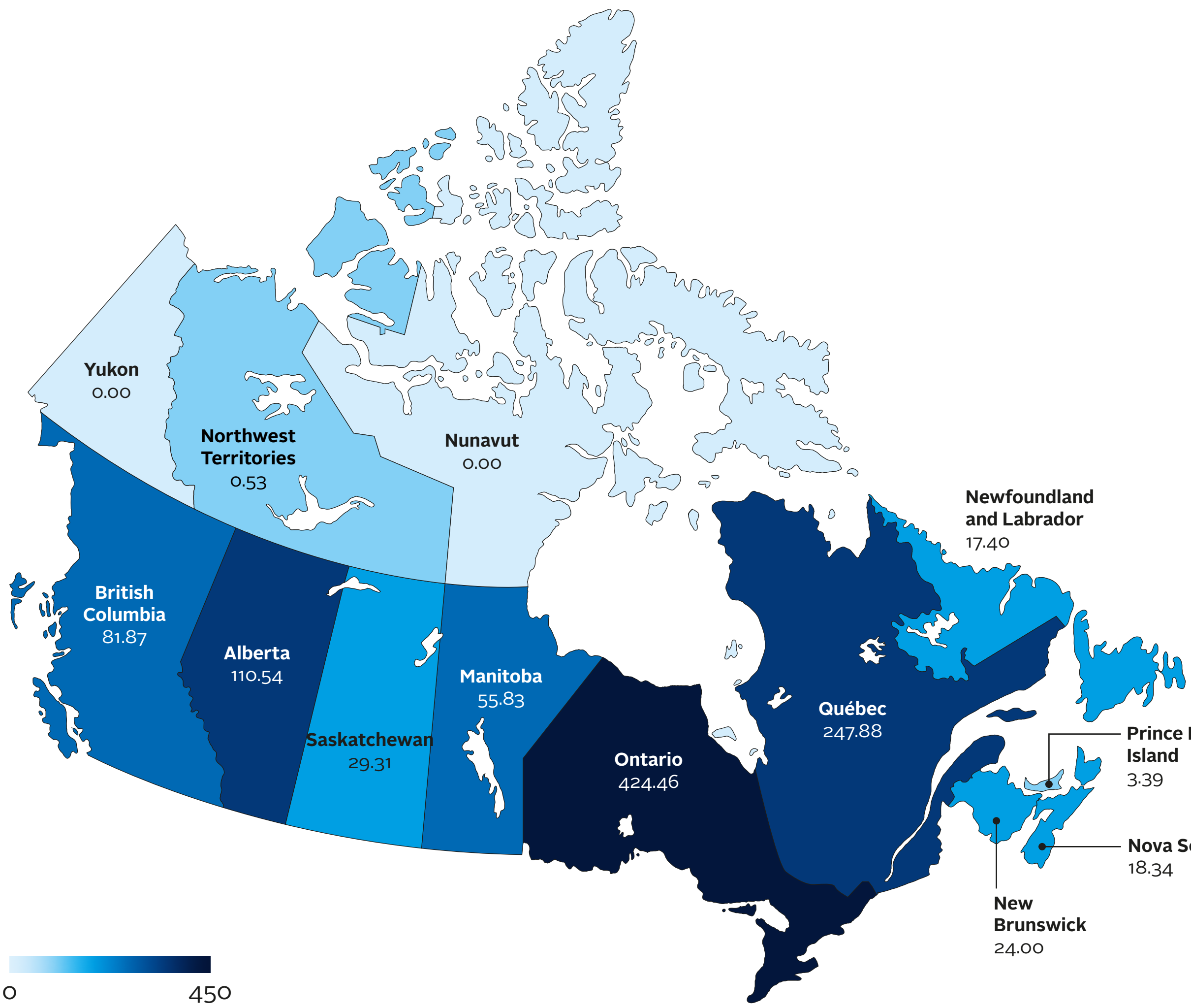
Beyond Canada's federal government, there are two primary layers of local government: provincial and municipal. Compared with the US municipal bond market (which includes all sub-sovereign debt), the Canadian provincial and municipal one is smaller, much less fragmented and has a higher proportion of debt held by foreign investors (see Figure 4).

PROVINCIAL BOND MARKET

Canada is split into 10 provinces and three territories. This report often focuses on provinces specifically, given that the territories have a more limited presence in debt markets. Provinces have taxation powers, decide on a range of rules and regulations, and provide various public services.[2]

In 2021, the outstanding amount of debt securities issued by the provinces and territories was CAN$1.01trn, two-thirds of which was from the two most populous provinces: Ontario and Quebec (see Figure 1).

Figure 1: Outstanding debt securities of Canadian provinces and territories (CAN$bn, preliminary 2021 data)



Sources: PRI; Statistics Canada table 10-10-0017-01: Canadian government finance statistics for the provincial and territorial governments.

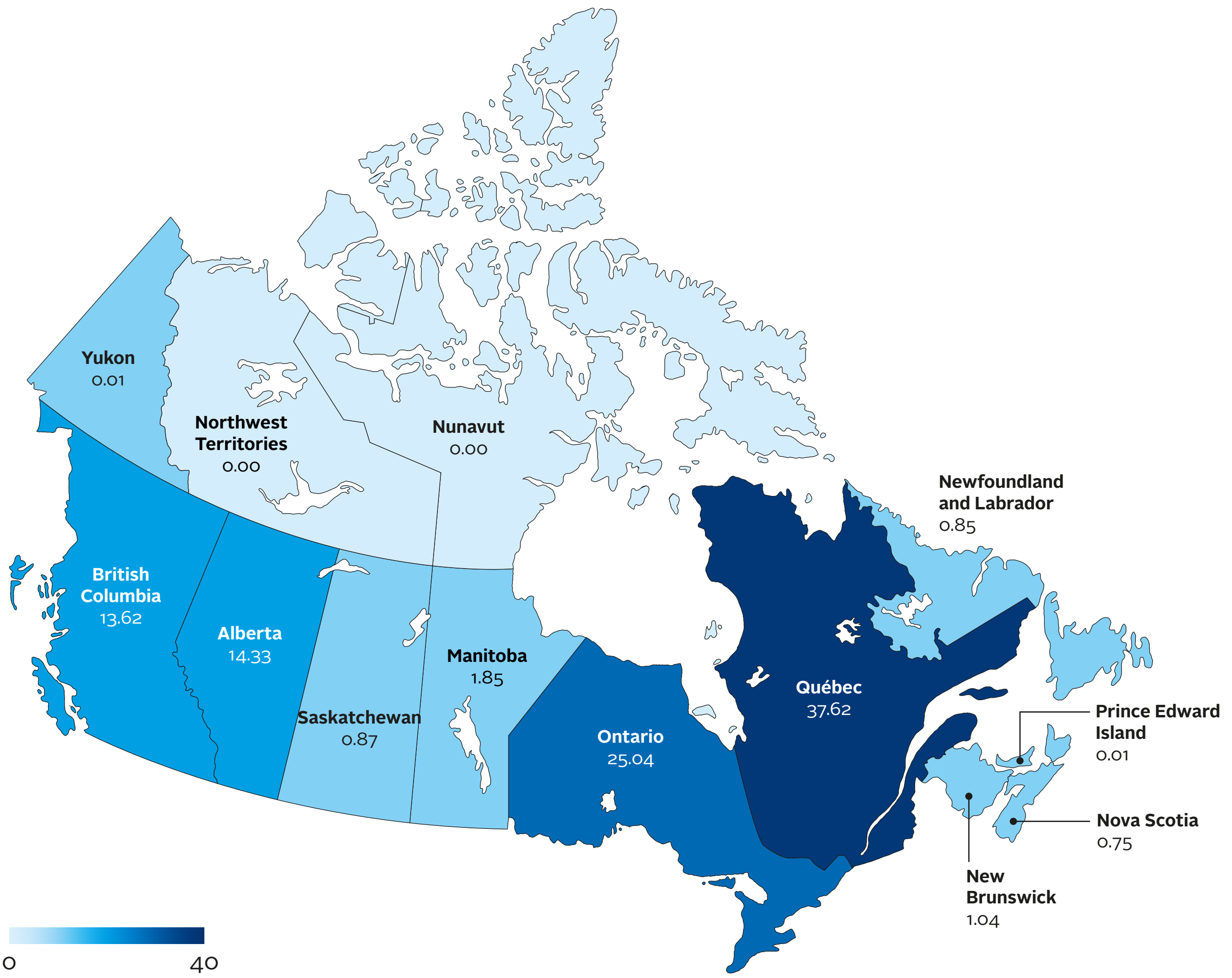
2 Government of Canada The constitutional distribution of legislative powers; Centre for Constitutional Studies Federalism

MUNICIPAL BOND MARKET

Municipalities provide a further layer of government in Canada, with more than 5,000 across the country.[3] Their power is more limited and generally defined by the relevant provincial government.[4]

Municipalities and other local public administrations can also raise debt, but, at CAN$96bn, the amount outstanding is far lower than that of the provinces. Almost all of it comes from municipalities in Ontario, Quebec, Alberta and British Columbia (see Figure 2). Some municipalities fund themselves through financing authorities.[5] In turn, these authorities can either be provincially funded or use capital markets. For example, the Municipal Finance Authority of British Columbia generally issues two bonds a year to finance local governments' long-term infrastructure.[6]

Figure 2: Municipal and other local public administrations' outstanding debt securities, split by province and territory (CAN$bn, preliminary 2021 data)



Sources: PRI; Statistics Canada table 10-10-0020-01: Canadian government finance statistics for municipalities and other local public administrations.

3 Statistics Canada (2017) Municipalities in Canada with the largest and fastest-growing populations between 2011 and 2016

4 Centre for Constitutional Studies Federalism; Enid Slack and Tomas Hachard (June 2021) Let's empower municipalities, too often the little siblings of federalism

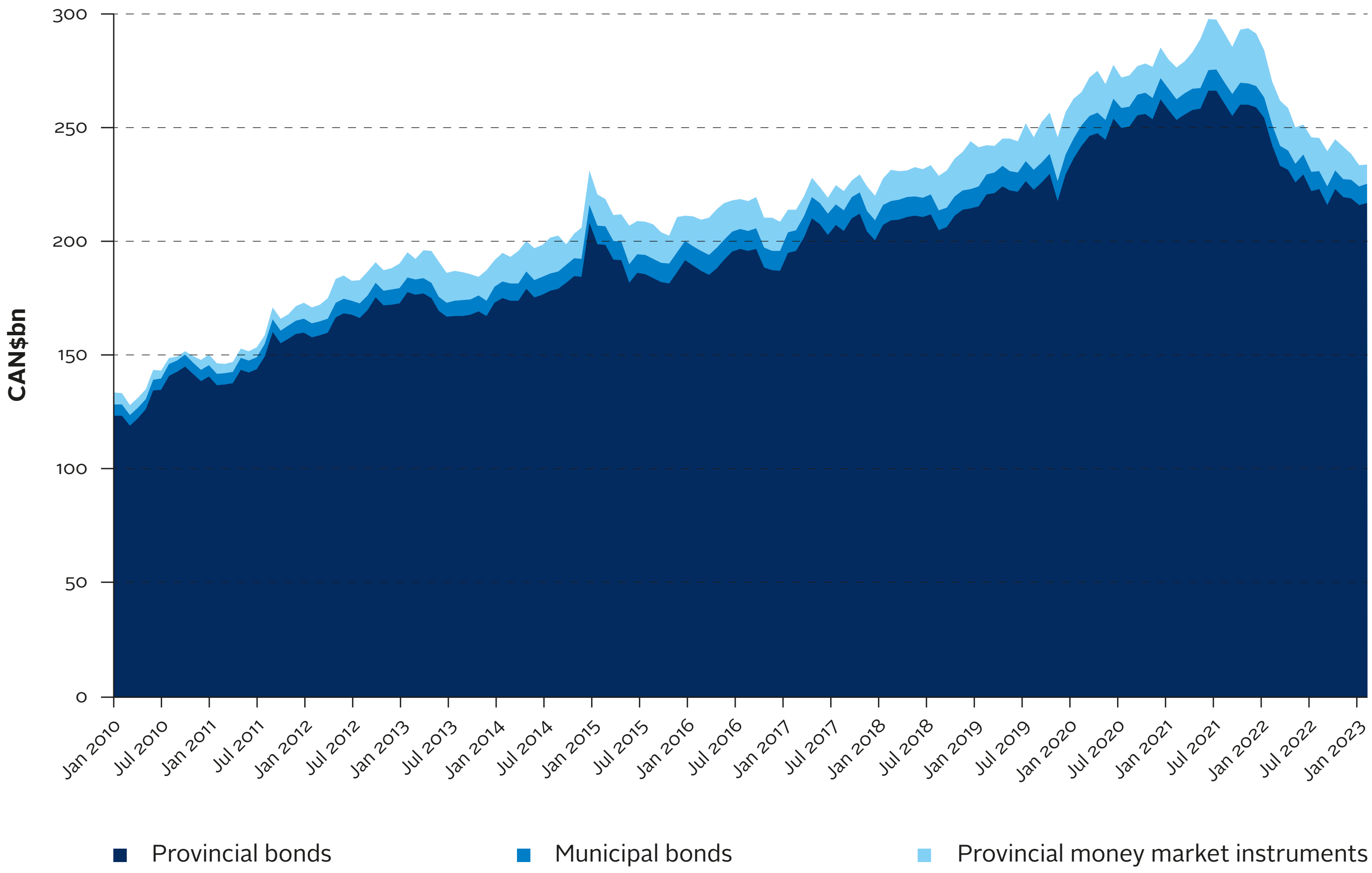
5 RBC Capital Markets (2018) Canadian Municipalities Primer

6 Municipal Finance Authority of British Columbia (2022) Sustainable Bond Framework

Provinces and municipalities can issue debt in foreign currencies; for example, Ontario regularly issues in US dollars, euros and sterling.[7] This has facilitated foreign ownership of provincial and municipal debt, which rose steadily in the decade to 2021 (see Figure 3) and represents 20%-25% of the total market.

For provincial bonds (excluding municipal bonds and provincial money market instruments) this foreign ownership is mostly in foreign-currency-denominated debt (30% is in US dollars and 31% in other foreign currencies, according to Statistics Canada data as of March 2023 based on market value[8]).

Figure 3: Foreign investment in provincial and municipal bonds and provincial money market instruments (market value, CAN$bn)



Sources: PRI; Statistics Canada table 36-10-0475-01: International investment position, foreign portfolio investment in Canadian bonds and Canadian money market instruments, by currency of issue and sector, monthly.

7 Ontario Financing Authority Foreign Denominated Bonds

8 Statistics Canada table 36-10-0475-01: International investment position, foreign portfolio investment in Canadian bonds and Canadian money market instruments, by currency of issue and sector, monthly

Another component of public administration involves Indigenous self-government. There are three groups of Indigenous peoples in Canada – First Nations, Métis and Inuit – making up 5% of the country's population.[9] While Canada's historic Indian Act gives limited administrative powers to First Nations, many Indigenous communities have moved further towards self-government.

There are now 25 self-government agreements encompassing 43 Indigenous communities, and around 50 more agreements are being negotiated.[10] The First Nations Finance Authority (FNFA), which issues debt in the capital markets, offers funding to First Nations in a similar manner to municipal financing authorities.

Figure 4: Differences between US municipal and Canadian provincial and municipal bond markets

	CANADA	US
Scope	▪ Local administrations ▪ Financing authorities that serve local administrations ▪ Translink, a Vancouver transport authority, and FNFA may also be considered part of this sub-asset class	▪ Local administrations ▪ Government enterprises and agencies ▪ Non-profit and private entities
Size	CAN$1.1trn	US$4.0trn
Proportion of ownership by foreign investors	20%-25%	3%

Sources: PRI; RBC Capital Markets (2018) Canadian Municipalities Primer; SIFMA (2023) US Municipal Bonds Statistics; Statistics Canada tables previously referred to in this section.

9 The Canadian Encyclopedia Indigenous Peoples in Canada

10 Government of Canada Self-government

RELEVANCE OF ESG FACTORS FOR RISK AND RETURN

As sub-sovereign debt instruments, Canadian provincial and municipal bonds are exposed to ESG factors in ways that differ from other asset classes. For example:

- **Geographical concentration:** Compared with sovereign debt issuers, provinces and municipalities raise taxes from a smaller area. This can increase vulnerability to environmental or social problems that are specific to a region. Canada's provinces vary a great deal economically, demographically and geographically, unsurprising in a country spanning six time zones.
- **Focus on whole population:** Provinces and municipalities are exposed to their entire population and economy through tax revenue in a way that corporate issuers are not, given that the latter's customers or clients are generally from one part of the population or economy. At the same time, provinces and municipalities face responsibilities and liabilities related to the entire population under their jurisdiction. This means that analysis of social and environmental factors needs to encompass the whole economy and population of provinces and municipalities.

Fixed income investors are generally more focused on the potential for a decline rather than a rise in value, due to the limited upside return available on debt instruments. As a result, bondholders look for opportunities for mitigating downside risk. When it comes to ESG factors, successfully transitioning to a low-carbon economy is one example of such risk mitigation.

The following sub-sections explore environmental, social and governance factors in greater detail. The relationship between inflation and ESG factors is also touched on.

ENVIRONMENTAL FACTORS

All countries and regions face risk from environmental factors, but Canada is particularly exposed to physical climate, climate transition and nature risks because of the importance of natural resources to its economy. This differs a great deal between provinces and territories, as Figure 5 demonstrates.

The extent of the reliance on natural resources is such that revenues of some provinces are materially tied to often-volatile global commodity prices. Oil-rich Alberta and potash-exporting Saskatchewan benefitted from sharp commodity price increases in 2021 and 2022, for example.[11] Bitumen revenue on its own accounted for 17% of Alberta's 2021-22 revenues.[12]

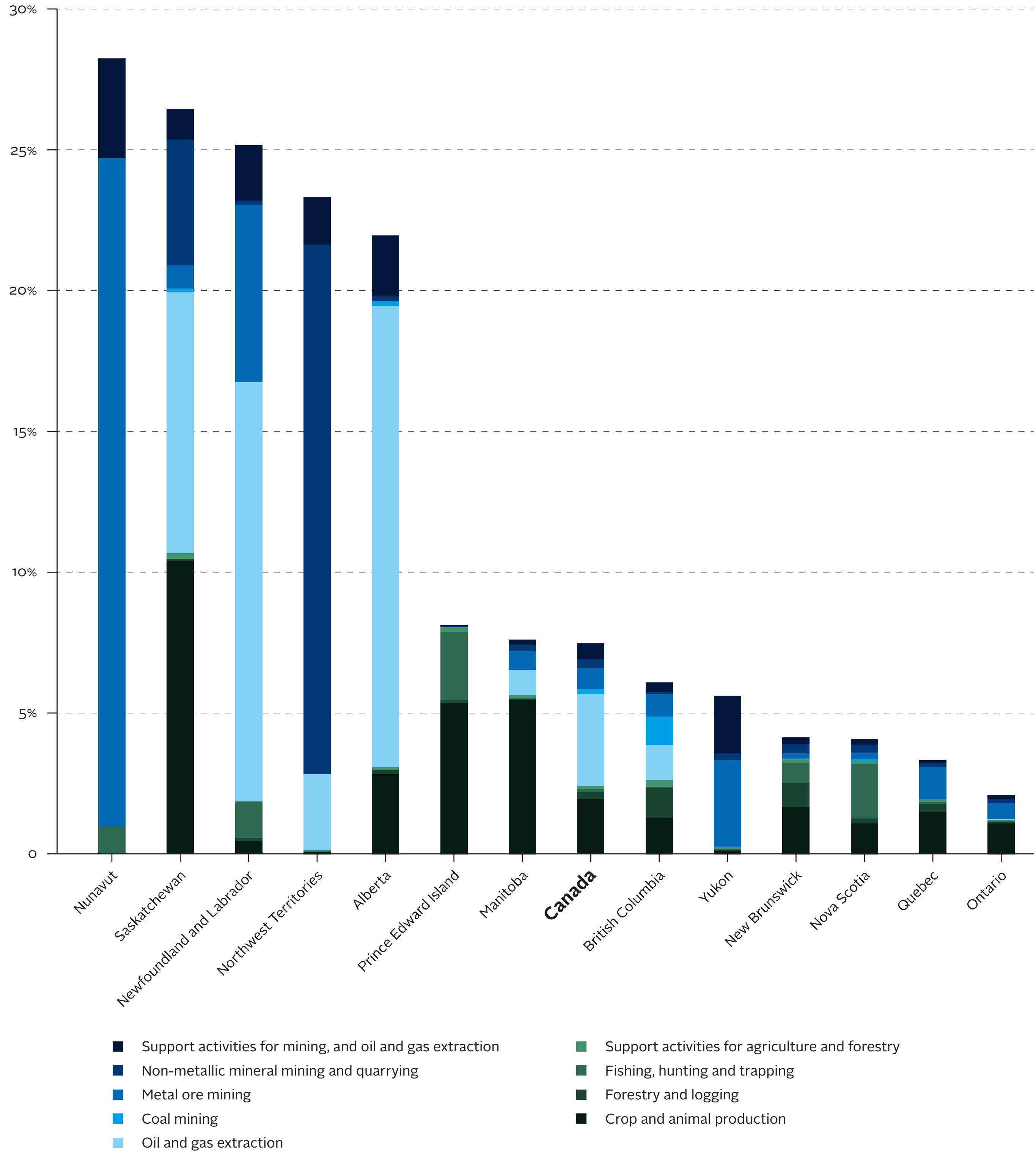
Changing environmental standards and norms, whether related to the transition away from carbon or other trends, may therefore be material for bondholders.

The remainder of this section focuses on two particular areas of environmental risk and opportunity: those related to carbon emissions and net zero, and those related to physical climate risk.

11 Reuters (June 2021) Canada's Alberta province back in favor with bond investors as oil rallies; The Economist (August 2022) A remote Canadian province luxuriates in the global supply crunch

12 Alberta Budget Revenue

Figure 5: Output of selected resource-intensive sectors as percentage of total industry output at the level of provinces, territories and Canada as a whole, in 2019.*



Sources: Statistics Canada table 36-10-0488-01: Output, by sector and industry, provincial and territorial; PRI.

*Data unavailable for Nunavut on crop and animal production, support activities for agriculture and forestry, and oil and gas extraction; data unavailable for Prince Edward Island on metal ore mining; data unavailable for most provinces and territories on coal mining.

EMISSIONS AND NET ZERO

One way to measure transition risk is through the carbon emissions of issuers. Emissions data from investee entities is also increasingly useful for investors to report to clients or to meet regulatory requirements. However, different ways to measure sub-sovereign emissions exist, and this is a developing area of practice.

Sixty percent of Canada's greenhouse gas (GHG) emissions come from Alberta and Ontario, although when weighted by population and by size of economy, Saskatchewan and Alberta have by far the highest emissions (see Figure 6).

Figure 6: Emissions profile of Canadian provinces and territories.*

Province or territory	GHG emissions (thousands of kilotonnes)	Kilotonnes of GHG emissions per 1,000 people	Kilotonnes of GHG emissions per 1,000 units of GDP
Alberta	256	58	755
Ontario	150	10	179
Quebec	76	9	179
Saskatchewan	66	56	834
British Columbia	62	12	216
Manitoba	22	16	313
Nova Scotia	15	15	342
New Brunswick	12	16	361
Newfoundland and Labrador	10	18	287
Prince Edward Island	2	10	238
Northwest Territories	1	31	311
Nunavut	1	15	172
Yukon	1	14	203

Sources: PRI; Statistics Canada table 38-10-0097-01: Physical flow account for greenhouse gas emissions; table 17-10-0005-01: Population estimates on July 1st, by age and sex; table 36-10-0402-02: Gross domestic product (GDP) at basic prices, by industry, provinces and territories, growth rates.

*Emissions data is from Canada's submission to the United Nations Framework Convention on Climate Change; emissions and population data is from 2020 while GDP data is from 2019 at basic prices.

Canada has committed to reach net-zero emissions by 2050, and some provinces, such as Newfoundland and Labrador, Quebec and Prince Edward Island, and some municipalities, such as Toronto, plan to reach net zero by 2050 or sooner.[13]

Investors must assess the practical ability of provinces and municipalities firstly to meet net-zero targets and secondly to succeed economically during and after the low-carbon transition.

13 Government of Canada Net-Zero Emissions by 2050

British Columbia, Ontario, Alberta and Quebec are leading the way among provinces in the transition, according to the Canadian Climate Institute,[14] despite all being among the top five emitters in gross terms. The climate institute found that Saskatchewan, the other province in the top five, is lagging, with a lack of policies to cut industrial and electricity emissions.[15] Investors may feel well-placed to make their own judgement, however, based on their assessment of provinces' public finances, economies and other factors. They should keep in mind that, with some caveats, Canadian provinces have power over the exploration, development, conservation and management of many resources, covering the gas and oil industry, as well as activities such as forestry and mining.[16]

At the municipal level, support from higher levels of government can be important for transition plans. For example, the Federation of Canadian Municipalities' Green Municipal Fund, which is funded by the national government, supports sustainable municipal projects.[17] In its 2021-2022 annual report it disclosed making CAN$137m of loans and CAN$75m of grants.

PHYSICAL RISK

Given its vast and varied geography, Canada faces an array of physical risks, as documented in a 2019 paper by the Council of Canadian Academies (CCA).[18] Many of these risks have implications for provincial and municipal bond investors through the effect on governmental budgets. Some of these are listed below.

Revenues:

- **Changing tax revenues due to effects on specific industries.** The physical effects of climate change will challenge many industries, although in some cases also offer opportunities. This will change the tax base for sub-national governments. For example:
  - Shipping: storms and floating ice could affect shipping on the St. Lawrence River, but melting Arctic sea ice could bring opportunities further north.[19]
  - Agriculture and food: fish stocks may fall.
  - Forestry: forests may be exposed to new pests and risks of wildfire.
- Disruption to tax revenues from acute weather events. Different parts of Canada will be at greater risk of floods, windstorms, wildfires and heatwaves. These events may harm business activity and therefore taxable income, for example through disrupting supply chains or preventing people from travelling to work. In August and September 2022, mudslides caused highways to close in British Columbia and Yukon, while flooding in November 2021 in British Columbia meant the Port of Vancouver was inaccessible by rail for eight days.[20]

Expenditures:

- **Increased cost of emergency response and repair.** Extreme weather events can damage infrastructure that falls under the responsibility of provinces or municipalities. The immediate response to events, including the clean-up, also soaks up governmental resources. Costs are shared between different layers of government (including the federal government), insurers, other private sector actors and charities, but the bill can still be steep for provinces and municipalities. Storms combined with rising sea levels make coastal communities particularly vulnerable.

  Extreme weather in British Columbia in 2021 led to the provincial government putting CAN$522m towards disaster and emergency assistance in relation to floods and landslides, and CAN$665m towards combatting wildfires.[21] This was on top of CAN$200m already budgeted for emergency measures. Municipalities also suffered high costs relative to their size.[22]

Second-order effects from the weather events can also be disruptive, for example high electricity demand for air conditioning during a heatwave causing power outages, or wildfires causing poor air quality and health emergencies.

As important as these risks is how governmental entities plan for them. For example, the CCA estimates that CAD$1 spent on reducing basement flood risks equates to CAD$11 in savings.[23] In the words of Manitoba's premier, the province suffered flooding "from all angles and all directions" in 2022; but costs may have been higher if it were not for historic investment in flood mitigation.[24]

14 Canadian Climate Institute Net zero opportunities: a province-by-province comparison

15 Canadian Climate Institute Saskatchewan: Risks and opportunities in the global low-carbon transition

16 Centre for Constitutional Studies Federalism; Thompson Dorfman Sweatman (2019) Canada's Constitution and Natural Resource Development

17 Green Municipal Fund Inspiring Innovation: 2021-2022 Green Municipal Fund annual report

18 CCA (2019) Canada's Top Climate Change Risks

19 The Conversation (September 2022) Navigating climate change: How shipping is adapting in the St. Lawrence

20 CBC (August 2022) Mudslide closes Highway 1 between Lytton and Spences Bridge; September (2022) Yukon's North Klondike Highway remains closed after multiple landslides; The Globe and Mail (February 2022) Cost of rebuilding B.C. after flooding nears $9-billion

21 Canadian Centre for Policy Alternatives (2022) A Climate Reckoning: The economic costs of BC's extreme weather in 2021

22 The Globe and Mail (February 2022) Cost of rebuilding B.C. after flooding nears $9-billion

23 CCA (2022) Building a Resilient Canada

24 CBC (May 2022) Everything, everywhere, all at once: The 2022 flood season in Manitoba; S&P Global Ratings (May 2022) Province of Manitoba 'A+' Ratings Affirmed; Outlook Stable

SOCIAL FACTORS

Demographics is a key component of social risk for governmental entities, given that the latter's responsibilities and potential tax base encompass the entire population of their jurisdiction.

Statistics Canada has developed a range of scenarios to project population change across provinces and territories, with differing assumptions for factors like fertility, immigration, life expectancy and inter-provincial migration.[25] M1 is one of its medium-growth scenarios and differs from other medium-growth scenarios in using what Statistics Canada calls an "average hypothesis" for inter-provincial migration. Therefore, the PRI has used this scenario to plot assumptions of population ageing and growth.

For a dozen years beginning in 2023, the average age in every province and territory in Canada is expected to increase under this scenario, but there are substantial differences in the proportion of the population aged 65 or over (see Figure 7). All else equal, a higher proportion of residents aged over 65 results in a lower proportion of the population paying income tax and a higher amount of spending needed on healthcare – a potential risk for bondholders, as this could increase the vulnerability of public finances.

Despite getting greyer, Canada's population will grow under the same scenario. Population growth is also relevant for investors, due to its effect on economic growth and the size of debt per capita. Growth is expected in every province and territory except Newfoundland and Labrador between 2023 and 2035, but the rate diverges (see Figure 8).

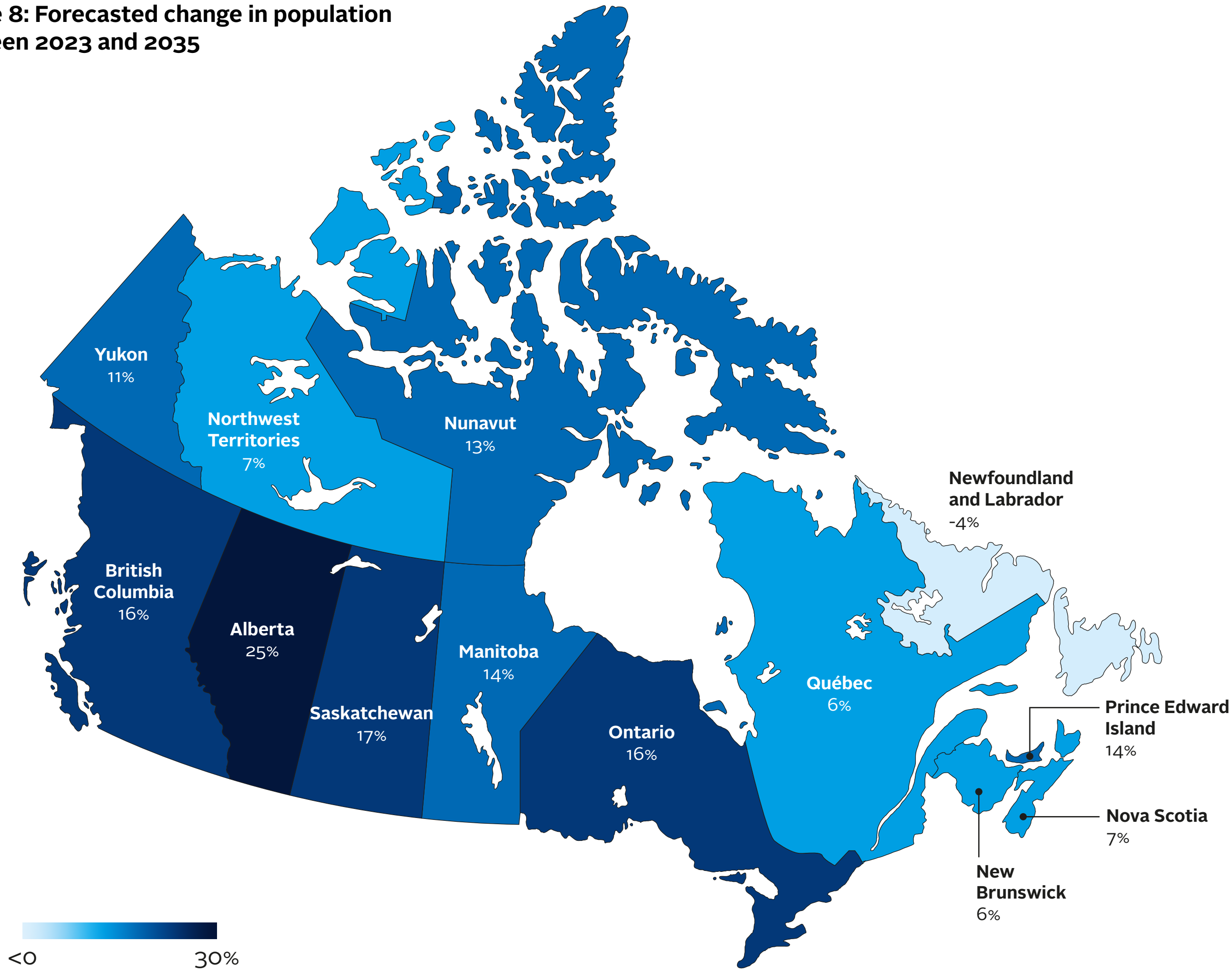
Figure 7: Proportion of population assumed to be aged 65 and over.

Province or territory	2023	2035
Newfoundland and Labrador	25%	32%
New Brunswick	23%	28%
Nova Scotia	23%	27%
Quebec	21%	25%
British Columbia	20%	24%
Prince Edward Island	21%	23%
Ontario	19%	22%
Manitoba	17%	19%
Saskatchewan	17%	19%
Yukon	15%	19%
Alberta	15%	18%
Northwest Territories	10%	15%
Nunavut	4%	7%

Sources: PRI; Statistics Canada table 17-10-0057-01: Projected population, by projection scenario, age and sex, as of July 1.

25 Statistics Canada (2022) Population Projections for Canada (2021 to 2068), Provinces and Territories (2021 to 2043): Technical Report on Methodology and Assumptions

Figure 8: Forecasted change in population between 2023 and 2035



Sources: PRI; Statistics Canada table 17-10-0057-01: Projected population, by projection scenario, age and sex, as of July 1.

Many other social factors that are relevant for governmental issuers in general also apply to Canadian provinces and municipalities, for example poverty and inequality, social cohesion, healthcare and education.

Another factor in Canada is recognition of Indigenous peoples' rights. The scope and nature of these rights – as recognised through international law, Canadian law and court rulings – vary between communities and may include rights over land.[26] The fate of corporate projects and activities, such as gas and oil pipeline construction, fish farming, forestry and mining, can depend on acceptance from Indigenous communities and whether their rights are upheld.[27] This issue may therefore affect provincial economies and tax revenues.

Provincial and municipal bondholders are also exposed to social risk through staffing issues. Around three-quarters of public sector employees in Canada are union members.[28] High levels of unionisation may make employee satisfaction and engagement particularly important; disputes between unions and provincial governments in Quebec and Ontario in 2022 and 2023 demonstrate how this issue can be both financially and politically material for provinces.[29] Salaries and wages account for 38% of provincial expenditure and close to 60% of municipal spending, reflecting the importance of the workforce for issuers.[30]

26 The Canadian Encyclopedia Rights of Indigenous Peoples in Canada

27 Moody's Investors Service (2020) Focus on Indigenous rights increasingly vital for project execution, corporate activities

28 Statistics Canada (2022) Trade union density rate, 1997 to 2021

29 CBC (November 2022) The dispute between Ontario's government and education workers, explained; (February 2023) Quebec premier asks unions for flexibility amid collective bargaining talks

30 RBC (2022) Proof Point: Canada's provinces are basking in revenue, but how long will it last?; S&P Global Ratings (June 2022) Various Rating Actions Taken On Canadian Municipal Governments On Improved Institutional Framework Assessment

GOVERNANCE FACTORS

Governance is particularly relevant for Canadian sub-sovereign debt to the extent that it affects how well issuers manage their finances.

In addition, provinces in particular have the ability to shape the environment in which they operate through their laws and policies, which can exacerbate or minimise any risks they face. Given that provincial governments are democratically elected, those policies may change overnight as a result of a new administration: for example, in relation to taxation, spending, fiscal targets and climate policies.

A clear example of this is in Alberta, where the left-wing New Democratic Party administration from 2015-2019 represented a break from more than 40 years of rule by the right-wing Progressive Conservative Association. Compared to its conservative rivals (who merged with another party and regained power in 2019), it had different approaches to matters such as taxation and carbon policy.[31]

This section focuses firstly on financial management as arguably the tangible component of governance for provincial and municipal bonds from a materiality perspective. It then touches on cybersecurity as an emerging governance risk.

FISCAL AND DEBT MANAGEMENT

While the prospect of default itself is normally remote for Canadian provinces and municipalities, a stronger fiscal governance framework can still lead to tighter credit spreads. A poor fiscal planning framework could also result in poorer social and physical infrastructure planning, an avoidable higher tax burden and sustained fiscal deficits.

Canadian provinces, territories and municipalities have varying abilities to borrow, which affects how investors view their fiscal and debt management.

Provinces: The 10 provinces have the greatest flexibility to raise debt. Excessive debt levels can raise credit risk and harm the financial performance of existing debt securities. In the 1990s, Canadian provinces started adopting balanced budget rules. A study by Haizhen Mou, Michael Atkinson and Stephen Tapp found that these policies were associated with smaller accumulated debt but that the rules may be weakened during worsening economic conditions.[32]

Territories: The Northwest Territories, Yukon and Nunavut, have borrowing limits of CAN$1.8bn, CAN$800m and CAN$750m respectively, as imposed by the Federal government.[33]

Municipalities: These entities generally have to pass balanced budgets each year, although exact rules vary and constraints can be relaxed, for example when revenues dried up because of Covid.[34] The restrictions on borrowing mean that municipalities may need to rely on reserves to fund projects or respond to emergencies: therefore, they must plan and budget effectively.[35] In general, while budgetary restrictions can be positive for bondholders, they may prevent municipalities from responding to challenges.[36]

CYBERSECURITY

It is becoming more evident that cybersecurity events can affect credit risk, with governments key targets for attacks.[37] The province of Newfoundland and Labrador discovered in 2021 that it had suffered a cyberattack on its health system: 200,000 records from health authority Eastern Health were taken.[38] The provincial government said the attack cost it CAN$16m.[39] While this is not particularly significant relative to its overall budget, the cumulative effect of future attacks on governments could be. This risk can be mitigated through appropriate government policies on cybersecurity.

31 The Tyee (February 2019) What Rachel Notley Actually Achieved; Financial Times (April 2019) Alberta election result signals trouble for Trudeau; BBC (April 2019) Alberta election: UCP wins majority victory over NDP

32 Haizhen Mou, Michael Atkinson and Stephen Tapp (2018) Do Balanced Budget Laws Matter in Recessions?

33 Government of Canada Territorial Borrowing Limits

34 CBC (June 2020) Canadian municipalities could face $20B budget shortfall from 3 months of COVID-related closures; Dentons (May 2020) Canadian municipal deficits, part of COVID's reach

35 Rural Municipalities of Alberta (2019) Understanding Municipal Financial Reserves

36 Enid Slack and Tomas Hachard (June 2021) Let's empower municipalities, too often the little siblings of federalism

37 S&P Global Ratings (2022) Cyber Risk In A New Era: How Cyber Risk Affects Sovereigns

38 CBC (March 2022) More health info stolen in N.L. cyberattack than government originally reported; (May 2022) Long before N.L. cyberattack, report flagged flaws in system.

39 CBC (May 2022) N.L. cyberattack costs approach $16M, health minister says

MOVING BEYOND CREDIT RISK

While ESG analysis in fixed income has focused mostly on credit risk historically, it can also be extended to other risks that bondholders typically explore, such as those related to inflation and monetary policy. While the latter is determined at the federal level, inflation can vary significantly across different parts of the country, for example due to a province changing its tax rate or minimum wage, or a commodity boom having a particularly strong effect on demand in one region.[40]

Inflation can be positive for provincial finances by raising the nominal amount of tax collected, but at the same time it can hinder purchasing power and worsen inequality, with negative economic consequences. It may also lead to inter-provincial migration as some people move to provinces with a cheaper cost of living.

Given the large weighting of certain provinces in Canada's economy, provincial ESG analysis could be useful in shaping inflation expectations at the federal level. For instance, Ontario accounts for around two-fifths of Canadian household consumer spending, and recently shelter has made up a relatively high proportion of its consumer price index basket.[41] Therefore, rises or declines in accommodation and housing costs in this province – which in turn can depend on social factors and sub-sovereign policies – will affect the national picture.

40 TD Economics (2021) A Regional Look at Canadian Inflation

41 Statistics Canada table 18-10-0007-01: Basket weights of the Consumer Price Index, Canada, provinces, Whitehorse, Yellowknife and Iqaluit; table 18-10-0007-02: Basket weights of the All-items Consumer Price Index by geography, Canada, provinces, Whitehorse, Yellowknife and Iqaluit; TD Economics (2022) Provincial Inflation Outlook: External vs. Domestic Drivers Shaping Provincial Inflation Dynamics

DRIVING OUTCOMES: EXAMPLES

Canadian provincial and municipal bonds can be useful to investors that adopt a thematic ESG approach, or are seeking to drive sustainability outcomes in their investments. Provinces and municipalities fund public services and infrastructure with tangible environmental and social benefits. In addition, provinces have substantial power to shape sustainability outcomes in their jurisdictions through their policies.

While all bonds have the potential to bring about positive or negative outcomes, some provinces and municipalities have issued labelled bonds that specifically earmark proceeds to environmentally or socially beneficial projects.

These allow investors to signal their participation in such projects and to monitor outcomes, although they should still conduct appropriate due diligence on these securities, for example verifying their compliance with standards such as the International Capital Markets Association (ICMA)'s Green and Social Bond Principles and Sustainability Bond Guidelines.

Ontario has led the way, having issued 12 green bonds at a total volume of CAN$13.5bn, with the first issued in 2014.[42] The province was one of a number of provincial and municipal issuers to come to the market with a labelled bond before the federal government of Canada issued its first green bond in March 2022.[43]

Some examples of how issuers have used the labelled bond designation are below.

Issuer	**Province of Quebec**[44]
Type	Green bond
Size	CAN$800m
Date of issuance	February 2019
Context	This was Quebec's fourth green bond, maturing in 2024. The province's green bond framework was given a "dark green" rating by Cicero, which found it to be aligned with ICMA's Green Bond Principles.
Use of proceeds	Three projects were deemed eligible to receive funds from the 2019 green bond: ▪ Réseau express métropolitain (75%-100% potential allocation): an electric transit system being built in the Greater Montréal area; ▪ Réno-Systèmes and Réno-Infrastructures (0%-15% potential allocation): programmes to maintain and improve Montréal's metro network; ▪ hybrid bus purchase (0%-10% potential allocation): buying buses for Société de transport de Montréal, a public transport enterprise for the eponymous region.

42 Ontario Financing Authority Province of Ontario Green Bonds

43 Government of Canada (March 2022) Canada issues inaugural green bond

44 Province de Québec 5-year green bond – CAD$800 million; Cicero (2022) Québec Green Bond Second Opinion; Province of Québec (August 2022) Green Bond Newsletter

Issuer	City of Toronto, Ontario[45]
Type	Social bond
Size	CAN$200m
Date of issuance	June 2020, September 2021
Context	Toronto created a social debenture framework in line with the ICMA's Social Bond Principles, with a second opinion from Sustainalytics. It issued a debut instrument in 2020 at a size of CAN$100m, and tapped the bond the following year, raising another CAN$100m. The security matures in December 2030.
Use of proceeds	Proceeds went towards three specific projects: ▪ George Street revitalisation project (62% of allocated funds): renovating George Street in Toronto, including relocating and improving a men's homeless shelter called Seaton House; ▪ housing and shelter infrastructure development (33% of allocated funds): creating new shelter beds; ▪ easier-access phases for Toronto Transit Commission (6% of allocated funds): making metro stations more accessible for people with disabilities.

Issuer	City of Vancouver, British Columbia[46]
Type	Sustainability bond
Size	CAN$100m
Date of issuance	October 2021
Context	Vancouver's first sustainability issue came under the umbrella of a sustainability bond framework covering green, social and sustainability instruments. The bond matures in 2031. Sustainalytics provided a second-party opinion for the framework and said it aligned with ICMA's Sustainability Bond Guidelines.
Use of proceeds	Proceeds were to be allocated to eight projects. Those receiving the most funding were: ▪ sewer and water main reconstruction (70% of allocated funds): replacing a combined sewer infrastructure system, where single pipes carry storm water and sewage, with one that separates storm and sanitary pipes; ▪ renewal of Sunset Yard (9% of allocated funds): a renewal project involving civil facilities.

45 City of Toronto Social Debenture Program; (June 2022) Social Bond Newsletter

46 City of Vancouver (October 2021) City launches first $100 million sustainability bond; City of Vancouver (2021) Investor Presentation; Sustainalytics (2020) Second-Party Opinion City of Vancouver Sustainability Bond Framework; City of Vancouver (October 2022) Sustainability Bond Framework Annual Information Update

NEXT STEPS

The PRI hopes that this report helps investors in Canadian provincial and municipal bonds frame how ESG topics can influence their decision making.

One area for future work in this market involves data and disclosure. Sub-sovereign investors, as with investors in other fixed income asset classes, would like better information in order to assess the ESG risks and performance of issuers.

Canadian provinces and municipalities are less used to disclosing ESG information in an investor-friendly format than listed corporates, although some have moved in this direction. For example, British Columbia has released an ESG report which tackles topics such as its climate strategy and social initiatives.[47]

Some considerations for investors and issuers are as follows:

- Smaller municipalities and provinces often lack the resources to disclose as much information as larger entities.
- Investors would benefit from issuers providing one page on their website where all ESG information can be found.
- Different forms of ESG information can be disclosed, for example, information relating to:
  - legislation, policies and strategies
  - investments and other budgetary decisions
  - indicators relating to particular sustainability outcomes

Engagement on ESG topics can be fruitful in the sub-sovereign debt market, albeit challenging due to resource constraints and political sensitivities.

47 British Columbia Ministry of Finance B.C. Environmental, Social and Governance (ESG) Summary Report

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The Principles for Responsible Investment (PRI)

The PRI works with its international network of signatories to put the six Principles for Responsible Investment into practice. Its goals are to understand the investment implications of environmental, social and governance (ESG) issues and to support signatories in integrating these issues into investment and ownership decisions. The PRI acts in the long-term interests of its signatories, of the financial markets and economies in which they operate and ultimately of the environment and society as a whole.

The six Principles for Responsible Investment are a voluntary and aspirational set of investment principles that offer a menu of possible actions for incorporating ESG issues into investment practice. The Principles were developed by investors, for investors. In implementing them, signatories contribute to developing a more sustainable global financial system.

More information: www.unpri.org

PRI Principles for Responsible Investment

The PRI is an investor initiative in partnership with UNEP Finance Initiative and the UN Global Compact.

United Nations Environment Programme Finance Initiative (UNEP FI)

UNEP FI is a unique partnership between the United Nations Environment Programme (UNEP) and the global financial sector. UNEP FI works closely with over 200 financial institutions that are signatories to the UNEP FI Statement on Sustainable Development, and a range of partner organisations, to develop and promote linkages between sustainability and financial performance. Through peer-to-peer networks, research and training, UNEP FI carries out its mission to identify, promote, and realise the adoption of best environmental and sustainability practice at all levels of financial institution operations.

More information: www.unepfi.org

UN environment programme | finance initiative

United Nations Global Compact

The United Nations Global Compact is a call to companies everywhere to align their operations and strategies with ten universally accepted principles in the areas of human rights, labour, environment and anti-corruption, and to take action in support of UN goals and issues embodied in the Sustainable Development Goals. The UN Global Compact is a leadership platform for the development, implementation and disclosure of responsible corporate practices. Launched in 2000, it is the largest corporate sustainability initiative in the world, with more than 8,800 companies and 4,000 non-business signatories based in over 160 countries, and more than 80 Local Networks.

More information: www.unglobalcompact.org

United Nations Global Compact