

Non-renewable Natural Resource Wealth Management and Distribution in Canada: National, British Columbia, Northwest Territories, Quebec



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Abstract Canada possesses some of the world's largest and most valuable non-renewable resource deposits. As of 2017, Canada was the world's fourth largest natural gas producer, fifth largest crude oil producer and a significant producer of gold, copper, coal, potash and iron ore. Management of these resources is complex, but largely resides with subnational governments, whether provinces or territories. As such, fiscal regimes, environmental and social regulations, distribution of resource revenues, and management of resource revenues vary across the country. This chapter summarizes the management of oil, gas and mining resources and revenues in Canada, with a focus on subnational sovereign wealth fund governance. Among our conclusions, we highlight low average effective tax rates by global standards, limits to the benefits that can be captured by the territories and a tendency towards discretionary use of sovereign wealth funds. We present three subnational sovereign wealth fund case studies from British Columbia, the Northwest Territories and Quebec, since these funds are explicitly meant to be financed in part by resource revenues. The Alberta Heritage Savings Trust Fund is covered in a separate chapter, and the Manitoba Stabilization Fund is not explicitly financed by natural resource revenues nor resides in a resource-dependent province. While some funds, namely the Quebec fund, have incorporated many good global practices in sovereign wealth fund management, the case studies underscore the need for withdrawal rules that help governments smooth fiscal expenditures and promote intergenerational equity, along with a need for greater public oversight.

Keywords Canada · Fiscal terms · Sovereign wealth fund · British Columbia · Northwest Territories · Quebec · Natural resource · Revenue management · Oil · Mining

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1 Who Owns Extractive Resources in Canada?

Canada is a federal state with ten provincial and three territorial governments (Northwest Territories, Nunavut and the Yukon). Ownership of subsoil assets is complex and rooted in a history of colonization. In brief, 89% of Canadian onshore territory is ‘Crown land’, owned by federal or provincial governments. Of this amount, approximately 46% of Crown land is owned by the federal government—the three territories as well as national parks, reserves and military bases—while 54% is owned by the provincial governments. Offshore resources are fully owned by the federal government (Government of Alberta 2019).

The remaining 11% of Canadian subsoil resources are owned by private entities. ‘Freehold land’ is a relic of the seventeenth century to the early twentieth century when settlers, the Hudson’s Bay Company and the railroad companies were granted rights to encourage colonization of the western provinces, develop the fur trade and build the transcontinental railway (Martin 1973). While these companies have retained some land, a portion has been sold to private individuals or corporations. In the province of Manitoba, approximately 75% of mineral rights are privately owned (Government of Alberta 2018b).

Subsoil ownership must be distinguished from rights to manage subsoil resources. Under the *Constitution Act* (1867, amended 1982), minerals, oil, gas and other natural resources are managed by the government of the province in which they are located. The federal government manages resources on federal lands, in offshore waters, and on the continental shelf (Government of Canada 2016). In order to mitigate any conflict between different levels of government, offshore oil and gas production is regulated by boards with representation from both federal and provincial governments, despite management being the legal responsibility of the federal government. Each jurisdiction in Canada (province, territory and federal government) has its own mining, petroleum, environmental and occupational health and safety legislation.

Direct federal involvement in the regulation of onshore oil and mining operations in the provinces is limited. For example, it includes some responsibility for safe handling of uranium, a nuclear fuel, and shares responsibilities for environmental protection with the provinces. Provincial governments are responsible for mining, oil and gas, including the exploration for, and the development and extraction of, mineral resources, and the construction, management, reclamation and close-out of mine sites within their respective jurisdictions. Provinces have the exclusive right to levy royalties and mineral taxes, though the federal government may collect corporate income tax from extractive companies (Government of Canada 2016). The one exception is on freehold land, where private landowners may lease mineral rights and levy royalties and taxes (Government of Alberta 2018b).

The three territories do not enjoy independent constitutional status (Baldwin and Fipke 2010). However, in recent years, lawmaking and regulatory responsibilities in the mining, oil and gas sectors have been delegated to the territories through a process called “devolution” (Irlbacher-Fox 2012). Prior to devolution, the federal government, through the Department of Indian Affairs and Northern Development,

was directly responsible for extractive activities in the three territories North of the 60th parallel, including mineral exploration and extraction, the development, management and reclamation of mine sites, and the collection of resource revenues and royalties in the Yukon and Northwest Territories (NWT). Through devolution, the federal government has reduced its role by devolving provincial-type responsibilities to the territorial governments.

The argument in favour of devolving these responsibilities is that it enhances “made in the North decision-making” concerning the development of mineral resources, allowing the territories to keep a portion of resource revenues (Government of Canada 2016). However, there is a strong argument that some Devolution Agreements have not been accompanied by adequate funds or administrative support to guarantee that the territorial governments’ new administrative responsibilities are effectively carried out, and that the share of resource revenues that can be retained without other transfers from the federal government being clawed back is too low to incentivize an equitable arrangement in the resource sector (Irlbacher-Fox 2012; Irlbacher-Fox and Mills 2007).

Currently, the three territories have responsibilities in the areas of land-use planning, environmental assessment, water resources, and royalty and tax collection (Government of Canada 2016). The resource sector is regulated by co-management boards consisting of representatives from Indigenous groups, the federal government and the territorial governments. In addition, Indigenous governments in Canada have particular rights and title to lands, protected by the Constitution of Canada. For Indigenous governments who have signed modern land claim agreements, these agreements often include rights for the Indigenous government to manage a portion of subsoil resources on their settlement lands. While the percentage of settlement lands on which Indigenous governments have rights to subsoil resources varies by agreement, in many cases this portion makes up about 15% of the Indigenous governments’ total settlement land (Baldwin and Fipke 2010). Additionally, under Canadian law, the Government of Canada has a duty to consult Indigenous nations and governments regarding extractive and other natural resource developments on their traditional lands (Baldwin and Fipke 2010).

2 What Are the Main Extractive Resources in Canada?

Although it has a diversified economy—the extractive sector generates approximately 8% of GDP on average—crude oil, natural gas and raw minerals represented more than 30% of exports in 2017 (MIT Observatory of Economic Complexity 2019). While most Canadian governments do not depend on natural resource revenues to finance their budgets, the governments of the provinces of Alberta, Newfoundland and Labrador and Saskatchewan are resource-dependent; around 20% of their fiscal revenues in recent years have been collected from oil, gas or mining companies. The Northwest Territories and Nunavut, both territories rather than provinces, are

resource-dependent as measured by GDP, though not in terms of fiscal revenues (Statistics Canada 2019b).

Canada produces more than 60 types of minerals. Natural Resources Canada, the federal ministry mandated to promote the natural resource sector, valued Canadian non-oil mineral production at \$43.9 billion in 2017, an increase of 11.3% from the 2016 total of \$39.4 billion (Government of Canada 2016). Canada's top five mineral products by value in 2017 were gold (\$8.7 billion), coal (\$6.2 billion), copper (\$4.7 billion), potash (\$4.6 billion) and iron ore (\$3.8 billion). British Columbia, Ontario, Saskatchewan and Quebec were the largest producers. All commodity groups recorded gains in value, but results for individual commodities varied, with coal recording the largest year-on-year increase at 55.6% or \$2.2 billion, a notable development in light of Canada's commitment to the Paris Agreement and striving towards climate change targets.

Canada's oil and gas sector is even larger than the mining sector, generating CAD 118.5 billion in 2017 (Statistics Canada 2018a). In the same year, Canada was the world's 5th largest crude oil producer and the world's 4th largest natural gas producer (British Petroleum 2018). The country holds 10% of the world's proven oil reserves, more than any other country except Saudi Arabia and Venezuela (British Petroleum 2018). Canada was also the largest foreign supplier of crude oil to the USA, accounting for 43% of total US crude oil imports (Natural Resources Canada 2018b). 99% of all Canadian crude oil and equivalent exports go to the USA. The oil sands of Alberta and Saskatchewan supply the vast majority of Canadian production. In 2017, oil sands production was 2.7 million barrels per day compared to 1.5 million barrels per day of conventional oil (Natural Resources Canada 2018b).

Given the capital-intensive nature of the industry, the oil, gas and mining sector has generated approximately 8% of GDP on average in recent years but employed fewer than 200,000 workers, or 1.2% of the labour force, in 2017. However, these jobs offer some of the highest wages in the country; the average salary in the extractive sector is more than CAD 100,000 per year (approximately USD 76,000) (Statistics Canada 2019a).

Furthermore, economic multipliers are among the smallest of any economic sector in terms of labour income, jobs and output.¹ Studies from Alberta, British Columbia, the Northwest Territories and the federal government have each shown that the non-renewable resource sector produces the fewest jobs per million dollars in output (e.g. 1.3 jobs in the extractive sector relative to 23.4 jobs in forestry and logging in the Northwest Territories) and wage multipliers are among the smallest of any industry (Northwest Territories Bureau of Statistics 2012; Ryser et al. 2008; Statistics Canada 2019). The upstream petroleum sector has the smallest GDP multiplier of any industry (Government of Alberta 2018a; Statistics Canada 2018c).

¹Multipliers are the change in one variable relative to the change in another variable. For example, in this context, the wage multiplier is the percentage change in overall wages from a given increase in extractive sector wages. Similarly, the GDP multiplier is the percentage change in overall GDP from a given increase in the extractive sector domestic production.

In theory, additional benefits could be generated from secondary and tertiary processing, for example petrochemicals, copper roofing or jewellery. However, processing from the extractive sector represents less than 1% of provincial GDP in each of the resource-dependent provinces. After all, producing raw materials usually does not give a country a competitive advantage in downstream processing of those materials (Toledano and Maennling 2018). Only Ontario has significant downstream mineral activity representing approximately 2% of provincial GDP (Alexander et al. 2018; Statistics Canada 2019b).

3 What Is the Fiscal Regime in Canada?

Canada's fiscal regime for oil, gas and minerals is complex by global standards. The federal government collects taxes and fees from extractive companies, such as federal corporate income tax. However, since natural resource governance is provincial jurisdiction under the Canadian constitution, each of Canada's ten provinces has the right to set its own natural resource-specific taxes, royalties and fees. As mentioned, the federal government has recently begun devolving responsibility over natural resource management, including fiscal regimes, to its three territories as well.

In general, Canada's tax environment can be described as favourable, even charitable, to oil, gas and mining companies. Among the most generous aspects of the various fiscal regimes in Canada are: (1) relatively low income taxes; (2) no royalty or royalty with cost deduction in most jurisdictions; (3) accelerated depreciation of capital assets; (4) tax credits for intangible assets that can be carried forward up to 20 years; (5) operating loss carry forward for up to 20 years; and (6) generous withholding tax limits or exemptions through tax treaties (KPMG 2016). A single federal tax incentive known as 'flow-through shares' that allows investors in exploration companies to deduct their costs from their own income taxes on unrelated activities cost Canadian taxpayers CAD 440 million dollars a year on average between 2007 and 2012, without any proven impact on productive exploration activity (Jog 2016). Table 1 provides a simplified summary of Canadian fiscal regimes in selected jurisdictions for mining for illustrative purposes.

The average effective tax rate, or 'government take', on a given mine depends on many variables, including commodity prices, costs of exploration and production, lifespan of the mine, and administrative capacity by governments to minimize tax avoidance. Therefore, it is impossible to attribute a single figure to the portion of oil, gas and mining rents being captured by the government. Ultimately, each field and mine is subject to a different 'government take'. That said, Canadian governments collect among the smallest shares of oil, gas and mining profits anywhere in the world. In 2012, Natural Resources Canada modelled an average-sized metallic mine using cost and price assumptions consistent with that time period. The study found that the average effective tax rate in Canada ranged from 20 to 30%, depending on the province, compared to 35-80% in Australia, Indonesia, Peru and Tanzania (Natural Resources Canada 2012). The one exception is Saskatchewan potash whose

Table 1 Simplified metallic mineral fiscal regime in Canadian jurisdictions (PwC 2016)

Jurisdiction	Income tax (%)	Royalty	Mining tax	Notable incentives	Mineral production (CDN billion) (Natural Resources Canada 2018a)
Canada (federal)	15			Generous deductions; investment tax credits; flow-through shares	43.9
Alberta	12	Greater of 1% gross revenue or 12% of net revenue		No cap on processing allowance	2.44
British Columbia	11		2% of net "proceeds" plus 13% of net revenue	Indefinite carry forward on most expenses; no cap on processing allowance	8.84
Manitoba	12		10–17% of net profits	Tax holiday until full costs are recovered, subject to govt approval	1.66
New Brunswick	12		2% of net revenue plus 16% of net profits		0.39
Newfoundland and Labrador	14		15% of net profit plus 20% of profit minus mineral tax paid		2.93
Northwest Territories	11.5	0–14% minus costs		Generous deductions from royalties	2.07
Nova Scotia	16		Greater of 2% of net revenue or 15% of net income	Accelerated depreciation	0.24

(continued)

Table 1 (continued)

Jurisdiction	Income tax (%)	Royalty	Mining tax	Notable incentives	Mineral production (CDN billion) (Natural Resources Canada 2018a)
Nunavut	12	0–14% minus costs		Generous deductions from royalties	0.84
Ontario	11.5		5–10% of net profits	Generous deductions; 36 month tax exemption for new mines or expansions	9.86
Prince Edward Island	16				0.00
Quebec	11.9		5% of net earnings plus 16–22.9% of profit, depending on profitability	Generous deductions	8.61
Saskatchewan	12	Dependent on mineral (e.g., 2.1–4.5% on potash; 5–15% on uranium); 3% resource surcharge charged on sales	Various taxes dependent on commodity	10-year tax holiday; costs are deducted from royalties; accelerated depreciation; no cap on processing allowance	5.72
Yukon	15	0–12% minus some costs			0.30

‘government take’ on large, viable projects is aligned with international standards at between 45 and 90% depending on prices (Keen et al. 2014).

‘Government take’ is largely in line with US rates, which are also among the lowest in the world. These percentages do not take into account base erosion, profit shifting and other tax avoidance measures, implying that the effective ‘government take’ is lower in each country.

Currently, the mining industry is taxed more lightly than other industries in Canada and provides significant benefits to investors. Depending on the province, the marginal effective tax rate on metallic minerals ranges from –9 to 21%. In comparison, the oil and gas sector’s marginal effective tax rate ranges from 13 to 40%, and the rate for non-resource industries ranges from 2 to 25% (Chen and Mintz 2013).

The mining sector's low, even negative, rates are mostly attributable to the generous rules around expensing of assets and low royalty rates or mineral taxes.

The Canadian petroleum sector is also characterized by low 'government take' by global standards. The IMF's standard fiscal model demonstrates that, on paper, the average effective tax rate for conventional oil in Alberta and Saskatchewan would be approximately 55%, making a number of assumptions, including an oil price of USD 50 per barrel. The same field would garner an average effective tax rate above 60% in the UK, North Dakota, Oklahoma and Texas, and more than 80% in Algeria and China. The gap between Canada and other countries is similar for shale oil (Daniel et al. 2017).

The World Fiscal Rating of Oil Terms published by Van Meurs Energy provides a more sophisticated assessment of 'government take' in the oil sector, though one that is difficult to communicate. The rating is based on modelling of different field size, cost and price scenarios. Canada's overall rating, which is an average of ratings across provinces and territories, ranks its fiscal regime in the 25th percentile globally, meaning that 'government take' in the oil sector is lower than in 75% of countries (Van Meurs Energy 2019).

It is more difficult to assess the fairness of fiscal terms on oil sands—which represent approximately two-thirds of Canadian oil production—since few countries outside of Canada and the USA produce such high-cost unconventional oil. However, one study by the Government of Alberta royalty review panel found that the government collects 60–100% of the "super-rents" generated by oil sand companies (Royalty Review Advisory Panel 2016).² The World Fiscal Rating of Oil Terms confirms that the fiscal regime for Alberta oil sands provides a higher 'government take' than for oil production in other Canadian jurisdictions. Still, if Alberta were a country, 'government take' would be lower than in 62% of the world (Van Meurs Energy 2019). On the other hand, the high cost of production on the oil sands and high transport costs means that fields are only viable when oil prices are relatively high, above USD 44 per barrel as of 2018 (CERI 2018).

Natural Resources Canada and the Canadian oil and mining industries view these low rates as a virtue, encouraging investment in the extractive sector. However, this perspective fails to recognize that, unlike automotive factories or software companies, oil fields and mines are location-specific, generate large economic rents and are assets owned by governments. As such, the fiscal regime can be adjusted to maximize rent collection without harming investment on viable fields and mines (Hogan and Goldsworthy 2010; Mintz and Chen 2012). Moreover, governments have a responsibility to their citizens to maximize revenue from sales of their assets, whether physical buildings or minerals under the ground.

The Canadian extractive sector is already appealing to global investors due to Canada's comparative advantages. These include a skilled and experienced workforce, well-established supplier networks, political and regulatory stability, relatively

²"Super rent" figures are based on rents above a 10% 'hurdle rate'.

low electricity and water costs, and good infrastructure, especially non-pipeline transport. Fiscal incentives are therefore needed less in Canada than in most countries to attract investment.

The IMF suggests that ‘government take’ in the oil sector can be as high as 90%—as has been the case in Angola, Kazakhstan and Norway in certain years—without harming investment on major projects (Daniel et al. 2017; Goldsworthy and Zakharova 2010). ‘Government take’ in the mining sector is generally lower than in the oil sector; however, the average effective tax rate can be raised to between 60 and 80% without diminishing investment on viable mines, provided that the fiscal regime is designed to be progressive and there is political and social stability, as is the case in intermediate and high price scenarios on medium-sized copper mines in Chile, Indonesia and Western Australia (Manley 2017; Keen et al. 2014).

The impacts of existing incentives are substantial exploration activity, development of marginal mines and oil fields, and shifting significant economic rents from Canadian governments to shareholders of large mining companies. Since the majority of shares are held by foreigners—for example, oil sands production is approximately 70% owned by foreigners, even if the majority of operators and their staff are based in Canada—the fiscal regime represents an enormous transfer of wealth to foreigners at the expense of Canadian governments (Financial Post 2012). The loss to governments totals many billions of dollars annually. As a result, less money is available for hospitals, schools, roads and other public services.

4 Revenue Collection and Distribution in Canada

As mentioned, the federal government collects corporate income tax from oil, gas and mining companies. It also collects value added tax (the goods and services tax), customs duties and withholding taxes, though these are largely offset by deductions or exemptions. Approximately one-third of resource sector payments in Canada are made to the federal government in an average year.

Provincial governments collect provincial corporate income tax, royalties and mineral taxes (when they are levied), value added taxes and various fees. Since the signing of Devolution Agreements with Canada’s three territories (the Northwest Territories, Nunavut and the Yukon) between 2003 and 2016, royalties have been collected by the territorial governments and transferred to the federal government. Property taxes, fuel taxes, and fees for water, land and road use are collected and retained by the territories. Corporate income taxes are collected and audited by the Canada Revenue Agency on behalf of the territories and transferred to them.

Some Indigenous governments also levy taxes, royalties or fees, often negotiated directly with companies. Payments are usually delineated in Impact Benefit Agreements or in land claim agreements. For instance, the Dehcho First Nations are entitled to 2.45–12.25% of royalties collected on mineral production in the Mackenzie Valley, depending on the royalty amount (Deh Cho First Nations—Government of Canada 2003).

In 2017, Canadian governments collected at least USD 8.87 billion from publicly traded oil, gas and mining companies, representing just under 6% of the gross value of production (Natural Resources Canada 2012; Resource Projects 2019; Statistics Canada 2018d). Of this amount, approximately USD 2.5 billion was allocated to the federal government (Resource Projects 2019). In comparison, Norway's government collected approximately 20% of the gross value of oil and gas production in 2017, though, in fairness, costs of production were lower in Norway than in Canada (EITI 2018; Norwegian Petroleum 2019).

The federal government makes transfers to the provinces and territories through various channels. The two most important for this discussion are equalization payments and the territorial formula financing (TFF), though the federal government also makes large health and social transfers. Equalization transfers are calculated based on as a standard amount each of Canada's 10 provinces should need to cover expenses ('the standard') minus the amount collected ('fiscal capacity'). Importantly, only half of natural resource revenues are included in the calculation, implying that natural resource revenue generation is penalized to a smaller degree than revenue generation from other sectors (Feehan 2014). The largest oil-producing provinces have regularly sought to exclude all natural resource revenues from the formula since they are the legal 'owners' of these resources and therefore feel they should retain all fiscal revenues generated by them. On the other hand, the recipient provinces support inclusion of all natural resource revenues since inclusion would increase the federal government's overall equalization payments pool (Béland et al. 2017).

Equalization payments totalled USD 14.3 billion in FY 2017–18, with Quebec the largest recipient. The most natural resource-dependent provinces—Alberta, Newfoundland and Labrador, and Saskatchewan—did not receive any payments (Department of Finance Canada 2017).

Under Territorial Formula Financing (TFF), the formula that determines the annual unconditional transfer from the Government of Canada to the territories, for each dollar a territory raises itself in taxes, approximately 70 cents are removed from the federal transfer. In other words, even if corporate income taxes from the resource sector rose significantly, much of the revenue would be clawed back by the federal government. Each territory is subject to its own Devolution Agreement, which sets special rules around distribution of natural resource revenues. The Northwest Territories Devolution Agreement, for example, allows the territorial government to retain the lesser of: 50% of mineral, oil, gas and water-related revenues (not including corporate income tax); or 5% of an amount called the 'Gross Expenditure Base', calculated at between CAD 70–100 million per year over the coming decade.³ Therefore, for the first CAD 100 million in resource revenues, which consist in largest part by royalties, the Government of the Northwest Territories would retain a maximum of CAD 50 million (Bauer 2017).

³The definition of resource revenues can be found on p. 13–14 of the Devolution Agreement, Government of the Northwest Territories (2013) available online at <http://devolution.gov.nt.ca/wp-content/uploads/2013/09/Final-Devolution-Agreement.pdf>.

This provision generates a massive disincentive to raise additional revenue and expand mineral production. As a result, the federal government loses out on the corporate income tax, sales taxes and other sources of revenue it would collect from the sector, not to mention any economic activity mining would generate in terms of spillovers. The transfer system also reinforces the Northwest Territories' dependence on the federal government since it creates a disincentive for the territory to raise its own fiscal revenues, further costing the Government of Canada in terms of fiscal transfers.

Fiscal transfers are also made to some Indigenous governments. For example, the Northwest Territories Devolution Agreement requires that 25% of the territory's resource revenues be transferred to the 9 of 12 Indigenous governments that have signed the resource revenue sharing agreement.⁴ Once other Indigenous governments sign the agreement, they too will be eligible for a share of the transfers. The money flowing to Indigenous governments cannot be spent on operational expenditures; they must be spent on capital investments or used for debt repayment.

In 2017, transfers to Indigenous governments in the NWT totalled CAD 10–15 million, distributed based on cost of living and population indicators. Despite not hosting active mines, the Gwich'in Tribal Council, Inuvialuit Regional Corporation and Sahtu Secretariat Incorporated receive approximately two-thirds of the transfers due to high cost of living in their territories and the size of their populations (Bauer 2017).

At the federal level, resource revenues are pooled with general fiscal revenues and spent according to legislation and annual budgetary allocations. At the provincial and territorial level, several governments have established special funds to manage a portion of their natural resource revenues or the fiscal surpluses engendered by resource production. For example, the Alberta Heritage Savings Trust Fund was established in 1976. The history and details of this fund are covered in Chap. 11 in this book. Quebec created the Generations Fund in 2006 and the Stabilization Reserve Fund, which is an account rather than a sovereign wealth fund (SWF), in 2009. In 2012, the Northwest Territories Heritage Fund was established. In 2015, the British Columbia Prosperity Fund was established, though it remains an embryonic SWF and may be discontinued.

5 Sovereign Wealth Funds

According to the International Forum on Sovereign Wealth Funds, a sovereign wealth fund is defined as a government-owned entity, established for a macroeconomic purpose, which does not have liabilities and invests at least partly in foreign assets (IFSWF 2019). As of 2019, there were approximately 60 SWFs financed by oil, gas or

⁴At present, there are nine signatories, including the Gwich'in Tribal Council, Inuvialuit Regional Corporation, Northwest Territories Métis Nation, Sahtu Secretariat Incorporated and Tłı̨ch̨o Government. Three groups have not signed the agreement.

mineral revenues or by fiscal surpluses in countries dependent on natural resources. Canada is host to at least four such funds, all at the subnational level.

There are several government-owned pension funds that meet the definition of a SWF, as well as mineral-financed funds owned or co-owned by Indigenous governments, such as the Raglan Trust. Canadian governments have also created a panoply of oil and mineral funds to finance resource exploration or promote the industry. However, in this chapter, we will focus purely on the funds listed above. For each case, we will discuss the fund’s: (1) history and objectives; (2) deposits and withdrawals; (3) investments; (4) institutional structure; (5) transparency and oversight; and (6) performance and political context.

5.1 British Columbia’s Prosperity Fund

The British Columbia (B.C.) Prosperity Fund was announced in 2013 with the aim of channelling the province’s liquified natural gas revenues to: (1) debt reduction (50% of the fund); (2) specific public investments (25%); and (3) savings for future generations (25%) (Government of British Columbia 2016). There is no legislation governing the fund, meaning all investments as well as transfers to and from the fund are discretionary.

Notwithstanding the fact that large natural gas projects have been cancelled, the government made two large deposits into the fund, a CAD 100 million deposit in FY 2015/16 and a CAD 400 million deposit in FY 2016/17 (see Fig. 1). As of February

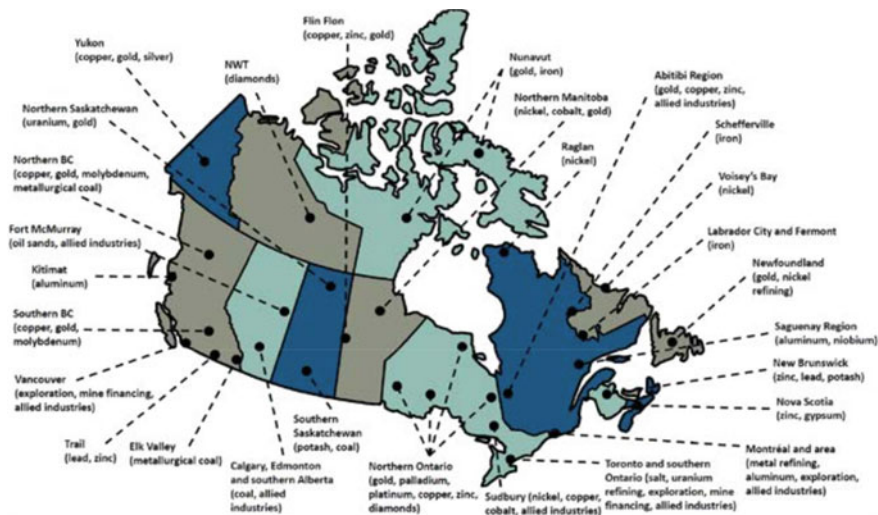
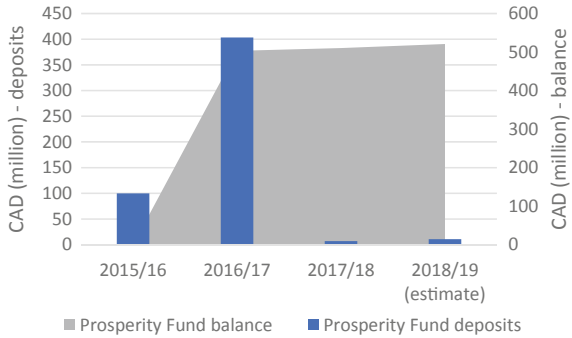


Fig. 1 Canada’s mineral production by province and territory. *Source* Mining Association of Canada (2017)

Fig. 2 B.C. Prosperity Fund deposits and balance. *Source* Annual budget documents, British Columbia Ministry of Finance



2019, the fund is still operational, though the only deposits over the last two years have consisted of interest earned on the existing balance.

The fund’s asset allocation has not been made public. Nevertheless, we can assume a low-risk mandate; the fund earned a mere 1.4% return in FY 2017/18 and 2.1% in FY 2018/19 (Government of British Columbia 2019). Given that the Government of British Columbia 10-year bonds yielded 2.6% as of February 2019, should the fund’s investment strategy remain unchanged, it would make financial sense for the balance to be used to pay down public debt. The Prosperity Fund has not published any annual reports or financial statements, nor is it subject to independent external audits except by the British Columbia Auditor General (Fig. 2).

5.2 Northwest Territories Heritage Fund

5.2.1 History and Objectives

In preparation for new resource royalties flowing from Devolution, the Government of the Northwest Territories (GNWT) passed legislation establishing a NWT Heritage Fund in 2012 (GNWT 2013b). The Northwest Territories Heritage Fund Act is vague on the fund’s objectives. According to the Act, the fund’s purpose is “to ensure that future generations of people of the Northwest Territories benefit from on-going economic development, including the development of non-renewable resources” (2012: 3). Financial statements from 2016 to 2017 state the Heritage Fund’s single objective is to “maximize long-term growth” of the money in the fund while “avoiding undue risk” (Beers 2018). The fund’s balance sits at 17.1 million Canadian dollars, which does not keep pace with current levels of inflation, as of July 2018 (GNWT 2018).

5.2.2 Deposit and Withdrawal Rules

In the fall of 2013, the NWT's Ministry of Finance undertook public consultations on the budget in seven regional centres. At these public consultations, the NWT's Ministry of Finance proposed that 5% of resource revenues be placed into the fund, or approximately 2.25 million Canadian dollars in 2013 (Wohlberg 2013). 95% would be earmarked for infrastructure investment and servicing the GNWT debt (GNWT 2013a). This sparked a healthy public debate over the appropriate deposit amount given perceived pressing spending needs (Wohlberg 2013).

In February 2014, Member of the Legislative Assembly Wendy Bisaro tabled a public policy report in the NWT Legislative Assembly pressing the Minister of Finance to commit more than 5% of revenues to the fund, and to introduce legislation to administer it. Following the debate, the Minister of Finance announced that 25% of GNWT extractive royalties would be allocated to the new Heritage Fund. The remaining 75% of resource revenues would be allocated for two other expenditure items proposed by the NWT's Ministry of Finance: debt repayment and infrastructure (GNWT 2013c). As of January 2019, this deposit commitment from the Minister of Finance, though on the public record, remains an informal policy statement (GNWT 2014, Personal communication, GNWT Ministry of Finance staff January 23, 2019). Neither the fund's purpose, nor many of the rules that generally govern sovereign wealth funds, such as deposit amounts, have been clarified in legislation or regulation.

GNWT's legislation introduced a 20-year period during which withdrawals from the fund are not permitted. Once the legislated twenty-year term has ended, the NWT faces a number of options for how much should be withdrawn from the fund and on what the money should be spent. One approach is to withdraw a five-year average of the interest earned (less inflation) while leaving the principal entirely in the fund, thereby establishing a 'permanent fund', and spending the interest via the annual budget process since territorial government spending through the budget is independently audited (Daitch et al. 2014).

5.2.3 Investment Rules

The current approach to investing the NWT Heritage Fund is very conservative, even compared to other funds that the NWT legislature oversees. Investing for the Heritage Fund allows only low-risk investments, including in government and bank bonds. In Fiscal Year 2016/17, the fund yielded a return of 1.05%, less than rate of inflation (1.525%). As a result, the fund posted a real return of -0.45%, equivalent to a loss of CAD 50,000 given the CAD 10.6 million balance in that year (Beers 2018). The mandate of the GNWT's 18th Legislative Assembly laid out that a review of the Heritage Fund Act was to take place, but this has not occurred to date. The fund continues to lose money against inflation and does not have a defined revenue stream (GNWT 2019).

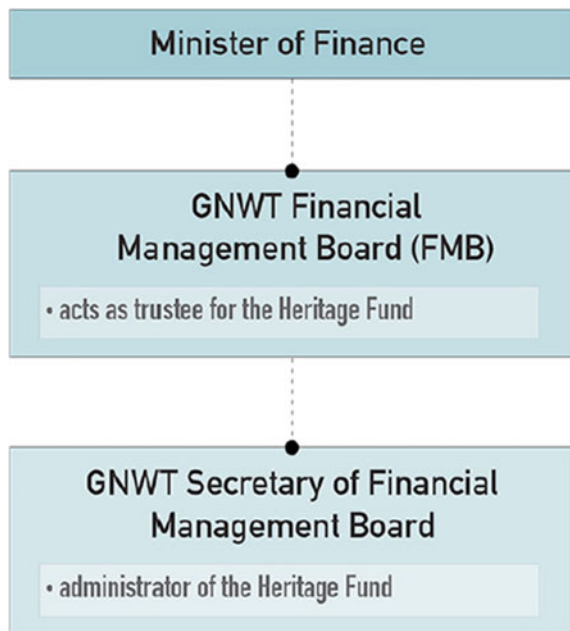
The fund is currently administered by the Financial Management Board's Secretary, who is appointed by the Minister of Finance. The Financial Management Board

overseeing the fund is made up of a committee of cabinet members. An independent assessment suggested that the fund’s low returns are the product of investment rules poorly suited to the NWT context as well as inadequate asset management capacity (Daitch et al. 2014). In February 2018, during a Legislative Assembly debate on this topic, government representatives indicated that there would be recommendations put forward to the Minister of Finance to allow for external fund management, proposing that the additional cost of external management would be offset by better fund performance. Subsequently, steps have been taken to secure external fund management, though it is not yet confirmed to be in place as of January 2019 (GNWT 2018; Personal Communication, GNWT Department of Finance, January 23, 2019).

5.2.4 Institutional Structure

The NWT Heritage Fund is currently managed by the GNWT Department of Finance. GNWT Legislation states that the Financial Management Board is authorized to act as trustee of the Fund (GNWT 2012). The Financial Management Board, composed of Cabinet Ministers and Chaired by the Minister of Finance, is responsible for monitoring the performance of the Heritage Fund and, on an annual basis, for directing and supervising the Secretary of the Financial Management Board. The Secretary, a member of the public service, is responsible for carrying the administration and maintenance of the Heritage Fund as directed by the Board. The fund does not currently use external asset management services (Fig. 3).

Fig. 3 NWT’s current fund governance model. *Source* Daitch et al. (2014); GNWT 2012c



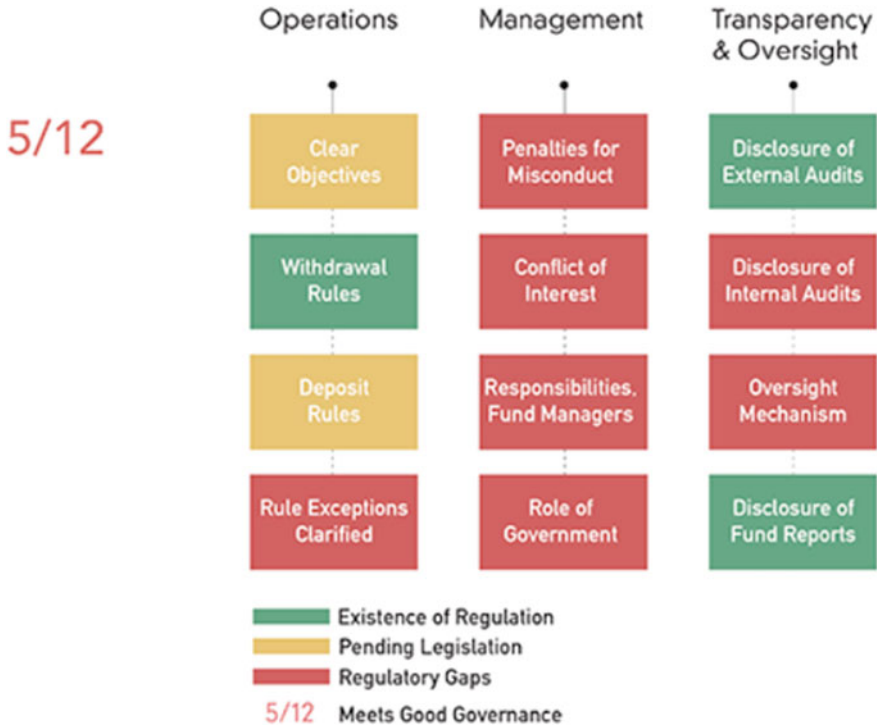


Fig. 4 NWT Heritage Fund: good governance and gaps in regulation. Source Daitch et al. (2014)

5.2.5 Transparency and Oversight

The balances of the Heritage Fund are summarized in a separate notes section of the GNWT budget. The GNWT budget is audited by the Auditor General of the GNWT. A separate report on the fund’s assets and activities is not made publicly available. To comply with global best practice on transparency, both internal and independent external audits would need to be provided to the Ministry of Finance and the Legislative Assembly and released publicly on a government website (Natural Resource Governance Institute 2017; IFSWF 2008).

There is currently no mechanism in place that allows for independent external oversight of fund operations, such as a special civil society committee, as in Ghana and Timor-Leste, or a legislative committee tasked with overseeing the fund, as in Alberta or Norway (Bauer 2013). While developing a stronger role for the public in fund oversight was one of the mandates for the NWT’s 18th Legislative Assembly, there has been no action taken on this aspect of the mandate to date (GNWT 2018).

5.2.6 Performance and Political Considerations

As non-renewable resources are discovered and developed in the territory, one of the government's priorities will continue to be to foster the well-being of future generations. Yet, despite large scale extractive projects operating in the territory since 1933, high poverty rates persist in the NWT's Indigenous communities (Irlbacher Fox 2012). Quality education, healthcare and nutritious foods remain inaccessible to many citizens.

On April 1, 2014, through devolution, NWT citizens gained greater control over their lands and resources for the first time since Canada's confederation. A Heritage Fund is a relatively new concept to most residents of the NWT that could, in theory, support the territory's devolution process as well as economic development over the long-run. Although the GNWT has held public consultations on the Heritage Fund in 2013, public education and engagement will be important in order to promote public awareness and help better define the fund's mandate, and further action has not been taken to develop this critical element (GNWT 2013e; GNWT 2018; GNWT 2019).

In addition, the fund's overall potential is stymied by very low resource royalties. NWT Member of the Legislative Assembly, Kevin O'Reilly, pointed out in a 2019 Legislative debate that the NWT will raise as much money from tobacco taxes and liquor revenues (about \$40 million) as the projected \$47 million in resource revenues for 2019–2020. A review of resource royalties, through re-examining the territorial formula financing and other aspects, has been pushed to the next legislative assembly; however, there is no guarantee this review will be done publicly (GNWT 2019). Meanwhile, extractive revenues flow out of the territory (Bauer 2018).

Future efforts to engage the public in a stronger role can help equip residents with the skills and knowledge to act as independent overseers to benefit the fund and its future. The more the public understands and supports the long-term objectives of the fund, the more it will hold current and future governments to account to protect the integrity of its original purpose. For example, Norway's fund enjoys broad public support as a point of national pride (MacKinnon 2013). If governance improves, the Heritage Fund could become a similar symbol of good resource stewardship.

5.3 *Quebec's Generations Fund and Stabilization Reserve 'Fund'*

5.3.1 History and Objectives

Quebec has one sovereign wealth fund and an account that serves as a budget balancing mechanism: The Generations Fund and the Stabilization Reserve Fund. The Generations Fund was established as a long-term savings fund in 2006 to address high and rising public sector indebtedness in the context of an ageing population. In that year, the share of net debt to provincial GDP was approximately 40% and rising

quickly; today it stands at 42%. The consequence was an annual interest rate of 4.7% for 10 year bonds and more than 12.5% of budget expenditure being allocated to debt servicing annually (Government of Quebec 2007).

In response, the major political parties agreed to establish a fund to reduce the province's debt burden. The Generations Fund would accumulate money, which would be invested in financial markets, earning a higher rate of return than the interest paid on public debt. In this way, public assets would increase so that net debt figures would improve. The book value of the Generations Fund was CAD 13.8 billion as of the end of 2017 (Caisse de dépôt et placement du Québec 2018). However, its balance was expected to drop to CAD 7.7 billion in 2019 as funds will be used to pay down the public debt (Finances Québec 2018a).

The Stabilization Reserve Fund was established in 2009 to capture a portion of fiscal surpluses in order to balance the budget during economic downturns. However, the fund is not actually a fund but rather an account used to comply with the government's balanced budget rule. Its balances therefore represent the fiscal space available to the government to meet its medium-term balanced budget target. As of March 2018, the Stabilization Reserve Fund 'balance' was CAD 7.2 billion (Finances Québec 2018b).

5.3.2 Deposits and Withdrawals

Under the *Balanced Budget Act* (1996, amended), the Quebec government may not run a budget deficit except in moments of economic or social crisis. Any surplus collected above expected revenue is used to repay short-medium to medium-term public debt. At the same time, the surplus is credited to the Stabilization Reserve Fund. The fund's balance therefore represents the fiscal deficit that is permissible in subsequent years without breaking the balanced budget rule. As such, the Stabilization Reserve Fund 'balances' are considered a part of revenues in budget calculations. In practice, Stabilization Reserve Fund 'balances' have been used to cover fiscal deficits even in boom years without circumventing the balanced budget rule. The fund's long-run average 'balance' for precautionary purposes is expected to be CAD 2.4 billion.

The *Act to Reduce the Debt and Establish the Generations Fund* (2006, amended) sets debt reduction objectives, which are elaborated in budget documents. By FY 2025–26, the gross debt must not exceed 45% of GDP and the "debt representing accumulated deficits" must not exceed 17% of GDP (Government of Quebec 2018a). The Generations Fund is meant to help achieve these objectives.

The Generations Fund was originally financed by hydropower royalties, earnings on hydropower outside of Quebec, sales of government assets, and earnings on fund investments. Later, two new sources of financing were introduced: All mining revenues and CAD 500 million annually from taxes on alcoholic beverages. In the four years since mining revenues have been added to the list of the fund's revenue streams, CAD 602 million in mining proceeds have been added. Mining revenues

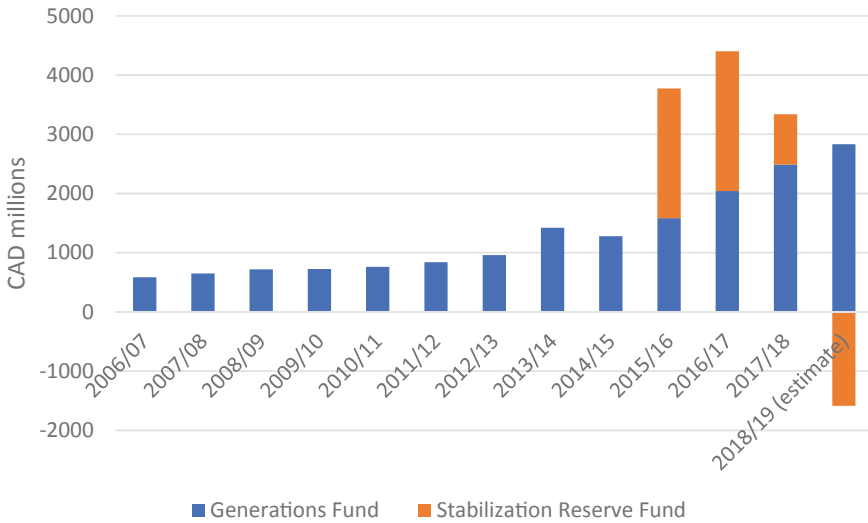


Fig. 5 Annual deposits and withdrawals from Quebec funds. *Source* Quebec Ministry of Finance budget documents. *Note* A Stabilization Reserve Fund deposit implies repaying public debt, while a withdrawal implies short-term to medium-term borrowing

have never represented more than 14% of new deposits into the fund (Government of Quebec 2017).

The government may also transfer money from the Stabilization Reserve Fund to the Generations Fund and has done so twice since the fund’s inception. In practice, this ‘transfer’ implies borrowing money to transfer to the Generations Fund. The government may draw any sum from the Generations Fund at any time, but only to repay the gross debt (Figs. 5, 6).

5.3.3 Investments

The Generations Fund investment policy is determined by the Ministry of Finance in collaboration with the fund’s day-to-day operational manager, the Caisse de dépôt et placement du Québec (the ‘Caisse’). The Caisse is a publicly owned institutional investor that manages Quebec’s more than CAD 300 billion in public pensions and insurance plans.

The Generations Fund is not subject to legislated investment rules. However, its target asset allocation is printed in Government of Quebec budget documents and risk management framework is disclosed on the Caisse website.

The Fund’s risk appetite is elevated relative to most SWFs—62.5% of the fund is invested in equities and alternative assets—though it is invested in slightly less risky assets than the Caisse’s pension holdings (see Fig. 4). The Fund is invested in

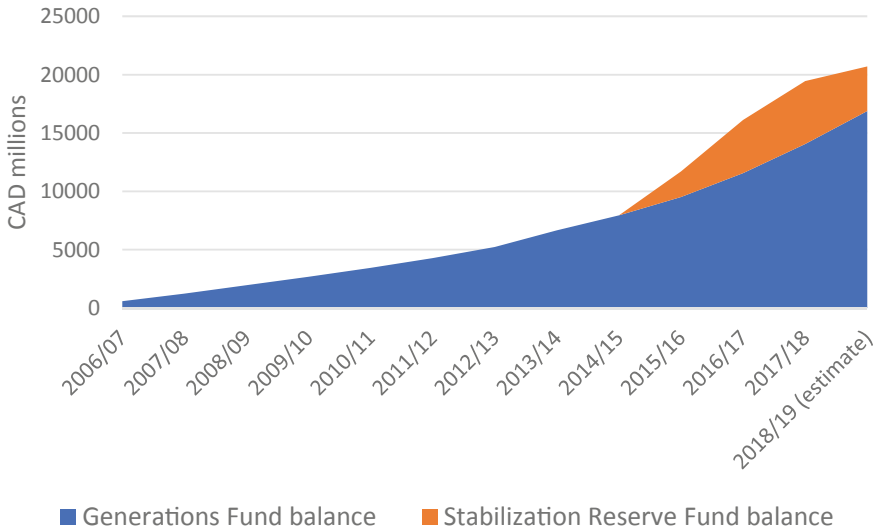


Fig. 6 Quebec fund cumulative balances, based on deposits (not book value). *Source* Quebec Ministry of Finance budget documents. *Note* Stabilization Reserve Fund balance represents fiscal space while complying with the balanced budget rule

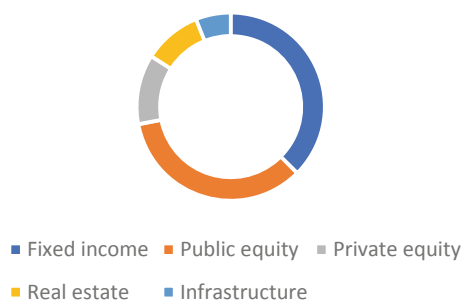
even the riskiest asset classes, including private equity, real estate, infrastructure and derivatives for currency hedging purposes.

This risk-level has led to healthy returns; the average annual rate of return on the fund has been 6.1% over the first 11 years of its existence. The Generations Fund's financial performance ranks it among the best performing SWFs in the world, similar to the Alaska and Texas funds and with higher returns than in Chile, Norway, Trinidad & Tobago or Wyoming (Bauer 2018). Returns remain strong due to a robust risk management framework. This includes a list of eligible assets, performance targets, benchmarks, risk limits, and independent oversight, including external audits and Board reviews (Caisse de dépôt et placement du Québec 2019).

On the other hand, an elevated risk appetite has also led to significant volatility in returns. In 2008, the fund lost more than 22% of its value, though balances were less than USD 1 billion at the time. In contrast, returns were 12.3% in 2010. The fund has earned CAD 3.4 billion in interest for Quebec citizens since inception (Government of Quebec 2017).

Since the Stabilization Reserve Fund is only a balancing account, it does not manage any assets (Fig. 7).

Fig. 7 Asset allocation for Generations Fund investments. *Source* Government of Quebec (2018b)



5.3.4 Institutional Structure

The ultimate owner of the Generations Fund is the Government of Quebec; however, the Fund is controlled and managed by the Quebec Ministry of Finance. The day-to-day operational management has been outsourced to the Caisse. A small portion of the Caisse's holdings have been outsourced to external investment managers. While deposits into the fund are subscribed in legislation, withdrawals to pay down public debt must be approved by the National Assembly through the annual budget process.

As with the Generations Fund, the Stabilization Reserve Fund is controlled and managed by the Ministry of Finance. While deposits into the Stabilization Reserve Fund are determined by the size of the budget surplus, withdrawals are relatively arbitrary. Therefore, the National Assembly has full power to determine both deposits and withdrawals. In practice, since the government and the majority in the National Assembly are usually one and the same under Quebec's Westminster system of government, cabinet decisions are often rubber stamped by the National Assembly.

5.3.5 Transparency and Oversight

According to legislation, the Minister of Finance must report to the National Assembly, in the Budget Speech, on the evolution of both the debt representing the accumulated deficits and the gross debt, on the sums credited to the Generations Fund and on any sums used to repay the gross debt. Deposit and withdrawal amounts for the Stabilization Reserve Fund are published in annual budget documents. Additionally, the Ministry of Finance has published extensive details on the Generations Fund's operations and finances on its website.

All funds placed at the Caisse are subject to an annual independent external audit as well as oversight by the Board of Directors. In its annual report, the Caisse provides details of its board and staff members, asset management strategy as well as every asset it holds.

The National Assembly and the Auditor General of Quebec examine both funds' finances as part of the annual budget process. Neither has performed a performance audit or investigation since their inception dates.

5.3.6 Performance

The Stabilization Reserve Fund and the Generations Fund have come under criticism from independent analysts and organizations along several lines: (1) The government has yet to establish a transparent and evidence-based framework for the optimal size of precautionary savings and appropriate use of the Stabilization Reserve Fund; (2) The Ministry of Finance has not released the Generations Fund's investment management policy; and (3) The Generations Fund delays debt repayment (Ordre des comptables professionnels agréés du Québec 2018; Laurin 2018).

As mentioned by others, the use of the Stabilization Reserve Fund is discretionary. This is a weakness in legislation that allows for pro-cyclical fiscal policy as a result of the balanced budget rule, an issue that could be addressed by replacing the existing rule with a more formal structural balanced budget rule or an expenditure growth rule (Bauer 2013).

We agree with others that Generations Fund governance could be improved if it released more detail on its investment management policy, for instance target return and volatility tolerance, as well as the specific assets held by the fund. However, given the Caisse's stellar performance history, we are less concerned about this issue.

With regard to the issue of financial savings and debt repayment, the math speaks for itself. As of February 2019, Quebec government 10-year bonds yield 2.7%, slightly lower than most provinces, and the government maintains a high grade credit rating.⁵ Quebec is no longer Canada's most indebted province, though 9.3% of provincial expenditure in FY 2017/18 was still spent on debt servicing, the government's third largest expenditure item after healthcare and education (Government of Quebec 2017).

By comparison, the fund has generated an annual average return of 6.1% since inception. As a result, in the current environment, reducing the debt by USD 1 billion at the expense of the Generations Fund would lead to an opportunity cost of approximately USD 34 million. As can be seen from this example, what matters more than gross debt is *net debt*.

Should the gap between the average return and provincial bond yields shrink significantly, a greater portion of fiscal surpluses ought to be allocated to debt reduction. However, the government's savings policy has been sound. Of concern, Quebec's new government, elected in 2018, plans to use CAD 10 billion of the Generations Fund to pay down the public debt. This would lower debt payments but, given the spread between sovereign debt interest rates and the rate of return on the fund, would lead to a loss of hundreds of millions of dollars to future generations of Quebecers.

⁵The drop in borrowing costs is mainly a product of lower interest rates across Canada, not an improved macroeconomic context in Quebec.

6 Conclusion

Canada is often lauded as a model of good economic and public sector governance. Its citizens benefit from relatively high per capita income, broad and fair access to quality healthcare and education, low crime rates, political freedoms and environmental protections (Social Progress Imperative 2018; OECD 2017). Yet these strengths and successes often mask specific failings, such as leading the world in per capita greenhouse gas emissions and chronic poverty and weak social indicators among Indigenous groups (Boothe and Boudreault 2016; Eisler 2018).

Similarly, the success of Canada's oil, gas and mining companies' in expanding production in Canada and abroad—along with Canada's well-earned reputation as a global leader in exploration, extractive technologies, and extractive sector project management—mask serious weaknesses in the sector's governance framework at home. This chapter has highlighted three challenges: low 'government take' by global standards, limits to the benefits that can be captured by the territories, and a tendency towards discretionary use of sovereign wealth funds. To these we can add challenges that fall outside the scope of this chapter, such as an antiquated licensing regime—for instance, in some jurisdictions, companies can physically "stake" and explore land without consulting nearby residents—and weaknesses in environmental oversight (Bauer 2017). Canada had one of the highest rates of known tailings accidents in the world from 2007 to 2017, second only to China (Roche et al. 2017). And, as of 2013, the Alberta government intervened in less than 1% of cases of alleged contravention of environmental regulations in the oil sands (Canadian Press 2013).

Canada's resource governance ought to be measured relative to its potential rather than in sheer production figures. Given the country's vast natural resource wealth, paying for social services and infrastructure should be easy for Canadian provinces and territories. Standard of living for citizens should be comparable to Iceland, Norway, Qatar or the UAE, where poverty has been all but eliminated among citizens and infrastructure is cutting-edge. Instead, several resource-rich provinces or territories—namely Alberta, Newfoundland and Labrador, Saskatchewan and the three Northern Territories—still struggle with poverty, especially in Indigenous communities living close to extractive sites; Austria and Oman are Canada's nearest comparables in terms of general standard of living.

The resource sector can fill the financing gap. While fiscal regimes in Canada incentivize exploration and development of marginal deposits, they generate some of the lowest government revenue per unit extracted anywhere in the world. Relative to fiscal regimes in most other countries, this system shifts billions of dollars in economic rents each year from Canadian taxpayers to shareholders of oil and mining companies. Furthermore, since many if not most of the shares of extractive companies operating in Canada are owned by foreigners, the system represents an implicit transfer of wealth from Canada to foreign countries. As has been shown, the employment benefits and economic multipliers do not justify such low tax rates.

A technical review of Canadian fiscal regimes for oil, gas and mining is warranted, as is an evidence-based public discussion on the net benefits of extraction in Canada.

At present, resource taxation policy discussions are usually focused on increasing production rather than increasing the benefits from extraction. Notably, the strength of industry sector interest groups—the Mining Association of Canada, the Prospectors and Developers Association of Canada, the Canadian Association of Petroleum Producers, provincial industry groups and public relations departments of the largest companies—in capturing policymakers and academic institutions makes broadening the discussion to include net benefits and ‘government take’ exceedingly difficult.

A proper review of distribution of resource revenues to the territories may also increase the net benefits accruing to Canadians. At present, Territorial Formula Financing and the Devolution Agreements, particularly in the Northwest Territories, discourage extractive activities and severely limit the benefits that can accrue to Northerners. Reforming these systems could help transform lives in the North, particularly among Indigenous governments who are entitled to a share of resource revenues and whose education and healthcare systems are chronically underserved.

Finally, Canadian governments, especially in resource-dependent provinces and territories, may wish to review aspects of how they manage their resource revenues. The key to benefiting from non-renewable resource wealth is investing the proceeds in financial assets (e.g. savings funds), physical assets (e.g. infrastructure) or human capital (e.g. universities) rather than consuming them. At the same time, mitigating the negative effects of resource revenue volatility on budget expenditures often requires a stabilization mechanism, whether a fund or through counter-cyclical debt management (Collier et al. 2009).

Historically, Canadian provincial governments have often made the implicit choice to prioritize consumption over investment of resource revenues. This emphasis on consumption shows up in some net debt figures. For example, while Alberta and Saskatchewan managed to keep debt levels low until recently, Newfoundland and Labrador’s net debt per capita nearly doubled in the decade from 1997 to 2007, the years of peak oil production. Today, the province has the highest rate of net debt per capita in Canada (Government of Newfoundland and Labrador 2018). Only the governments of Alberta and Quebec have significant financial savings in sovereign wealth funds, though in Alberta, the savings are much less than economic models suggest are optimal (Van der Bremer and Van der Ploeg 2014).

In some regions, the choice to consume rather than invest has taken the form of low taxes, leading to greater discretionary income for households at the expense of public investment. Alberta, British Columbia, Ontario, Saskatchewan, and the Territories, several of the most resource-dependent regions, have some of the lowest personal income tax rates in the OECD (EY 2017). These same jurisdictions plus Manitoba minus Ontario have some of the lowest value added tax rates (OECD 2018). In a different subset of jurisdictions, governments have underinvested in public services and infrastructure, as evidenced by Canada’s more than CAD 180 billion infrastructure gap (Government of Canada 2018). On an optimistic note, resource-dependent provinces and territories seem to have learned lessons from the past; today, they are the ones invested most heavily in modern infrastructure and education (Statistics Canada 2016; Statistics Canada 2018b).

What's more, most resource-rich provinces have historically not countered the negative effects of commodity price volatility on government budgets, either because it was unnecessary due to low resource revenues or as a result of a lack of appropriate counter-cyclical fiscal rules (Atkinson et al. 2016). However, over the last three decades, several provinces have taken steps to introduce mechanisms to smooth fiscal expenditures. For example, Manitoba established a stabilization fund in 1989 (current balance less than CAD 200 million) (Government of Manitoba 2018; Tapp 2013).⁶ Quebec established the Stabilization Reserve Fund in 2009 to support its cyclically adjusted balanced budget rule. The British Columbia Prosperity Fund was established in 2013, partly to stabilize the budget. And Alberta created the Contingency Fund in 2013 to mitigate the effects of oil revenue volatility (NRGI-CCSI 2013). Interestingly, Saskatchewan established a Fiscal Stabilization Fund in 2000, which was replaced by the Growth and Financial Security Fund in 2008. The government abandoned efforts at counter-cyclical fiscal policy when it wound down the fund in 2016 (Graham 2016).

Foreign governments could draw on some of Canada's more successful experiences to improve their natural resource revenue management. With respect to revenue distribution, Canada's equalization formula and some Territories' revenue sharing formulas with Indigenous governments are both useful models that could be adapted to different contexts. With respect to fiscal stability and sustainability, Alberta's *Fiscal Management Act* (2013) and Quebec's *Act to Reduce the Debt and Establish the Generations Fund* (2006) both represent practical examples of how to manage large, volatile and finite revenue flows. It should be noted that, similar to other global experiences of resource revenue management, in each of these cases, governments mismanaged their public finances for decades before enacting more responsible and broadly accepted fiscal management legislation.

Canadian governments may wish to build on the success stories within Canada and draw lessons from countries like Chile, Norway and the UAE on how to smooth fiscal expenditures, promote fiscal sustainability, and invest in projects that will help diversify their economies. Regarding the funds captured in this chapter, we have specific recommendations.

In British Columbia, the disparity between the fund's earnings and the cost of capital to the provincial government suggests that the fund's balances would best be used to pay down public debt or be allocated to finance public services. Furthermore, the province is not resource-dependent nor is it expected to be in the foreseeable future, meaning that existence of a subnational sovereign wealth fund to manage resource revenues may not be justified. On the other hand, the government could convert the fund into a contingency or stabilization fund that would serve during economic downturns.

The Northwest Territories Heritage Fund is a nascent fund and, as such, may require significant changes to its governing legislation and regulations to meet international good practices in sovereign wealth fund governance. Among our recommendations are: (1) clarifying objectives, as the investment strategy and deposit and

⁶New Brunswick also had a short-lived fiscal stabilization fund.

withdrawal rules each flow from clear fund objectives; (2) formalizing the deposit amount; (3) clarifying how withdrawals will be used once the 20-year no-withdrawal period has ended; (4) drawing on independent expertise to revise the investment mandate and hire external managers; (5) requiring independent audits once the fund reaches a critical size; and (6) publishing annual reports online that cover, among other information, balances, returns, assets, fund managers, significant fund activities and transactions. Since fiscal revenues are smoothed through federal transfers to the Northwest Territories, we would recommend that the fund serves as a future Generations Fund and that the returns be earmarked to underfunded expenditure items, such as renewable energy or education.

In many ways, Quebec's Generations Fund is a model of good governance. Its deposits and investment strategy are rules-based and consistent with the fund's objectives, it is well-managed by a professional entity, it is transparent and audited annually, and the fund serves a logical macroeconomic purpose. Its main weakness is the ability of the government to make arbitrary and discretionary withdrawals. Withdrawals ought to be a function of the spread between sovereign debt rates and the long-term return on the fund; the rule should be codified in legislation. Similarly, the use of the Stabilization Reserve Fund should be clarified by formalizing a counter-cyclical fiscal rule in legislation. Part of the challenge may be that the respective funds' roles in promoting intergenerational equity and stabilizing fiscal expenditures are poorly understood, not only by the public but also by Quebec policymakers.

Finally, we would recommend that both Newfoundland and Labrador and Saskatchewan consider enacting counter-cyclical fiscal rules that would smooth fiscal expenditures and better balance spending today with the needs of future generations. This may imply establishing sovereign wealth funds, certainly in the case of Saskatchewan given low public debt levels, provided that fund design is aligned with global best practices such as the Santiago Principles. In 2017, Saskatchewan collected at least CAD 1.4 billion (USD 1.1 billion) in revenue mainly from oil and potash, representing more than 20% of fiscal revenues. Newfoundland and Labrador collected at least CAD 989 million (USD 761 million) in the same year, mainly from offshore oil, representing just under 20% of provincial fiscal revenues (Resource Projects 2019; Government of Newfoundland and Labrador 2017; Government of Saskatchewan 2018). Both provinces are resource-dependent, and government spending tends to oscillate with the ups and downs of commodity prices, amplifying boom-bust cycles that harm growth and lead to poor public investment choices (RBC 2018). Along with other parts of Canada, Saskatchewan and Newfoundland and Labrador could benefit from a more evidence-based and longer-term vision of resource revenue management.

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