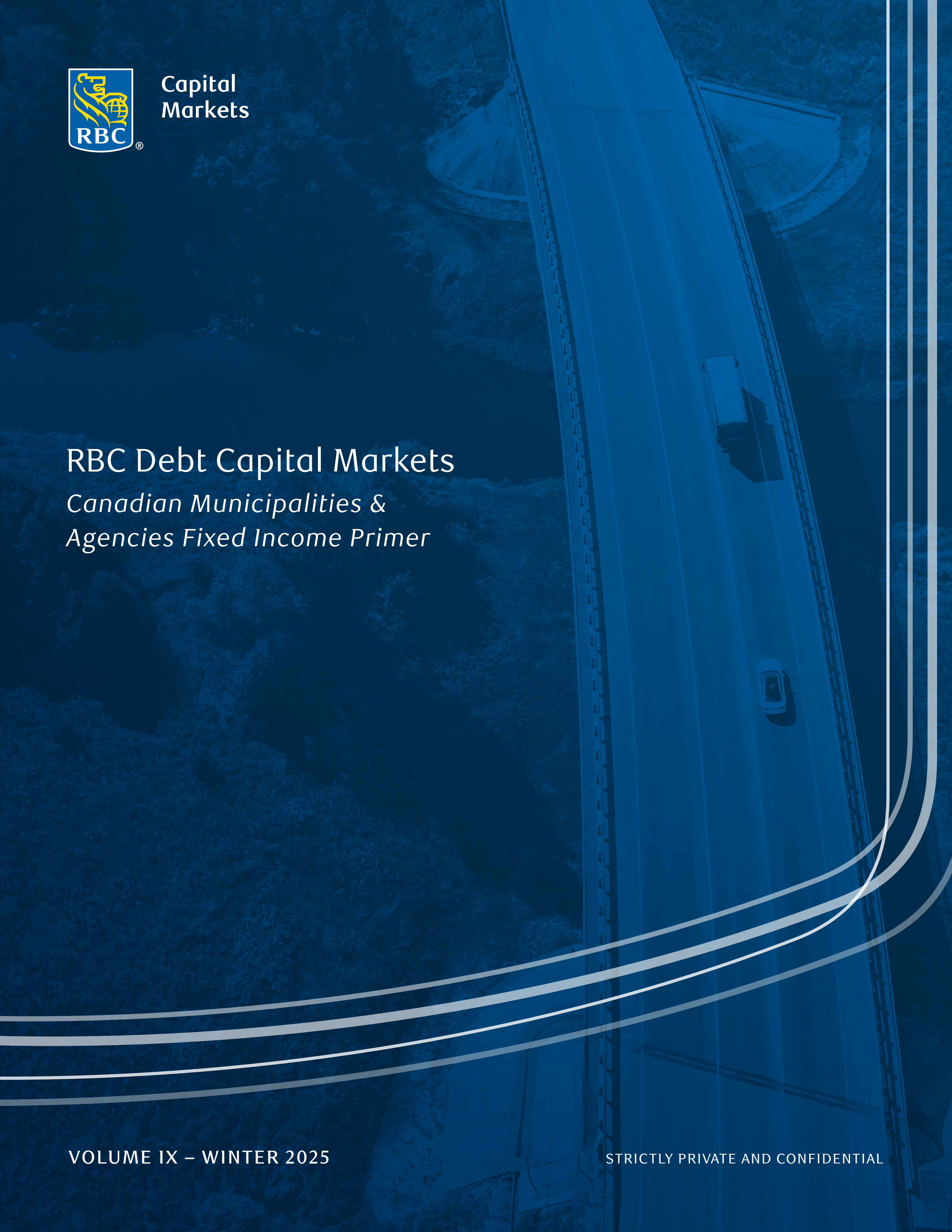

Capital
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RBC Debt Capital Markets

Canadian Municipalities & Agencies Fixed Income Primer

VOLUME IX – WINTER 2025

STRICTLY PRIVATE AND CONFIDENTIAL

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1. INTRODUCTION AND MUNICIPAL & AGENCY SECTOR HIGHLIGHTS

Introduction

The 9th edition of RBC's Canadian Municipalities & Agencies Fixed Income Primer coincides with a strong year for the Canadian Municipal & Agency market as issuance volumes surged to their 2nd highest level on record. The market was reinvigorated in 2024, as total supply reached C$5.8 billion, just below the record C$5.9 billion seen in 2021. The heightened activity in the municipal & agency market was supported by a stable municipal & agency credit basis, performance in underlying provincial spreads, a mid-year rally in Government of Canada yields, and considerable demand for municipal & agency credit.

RBC is pleased to recap the developments that unfolded in the Canadian municipal & agency fixed income market during 2024. We are proud to once again be a market leader in providing liquidity for municipal & agency issuers, as illustrated by the resources that we deploy in the sector as well as our ranking as a top-2 liquidity provider for municipal & agency bonds in 2023 & 2024. RBC is also an active participant in Quebec municipal auctions and has gained significant market share, ranking 2nd among the 5 major Canadian Banks in 2024.

At the beginning of 2024, the Canadian municipal & agency market had been coming off of its lightest issuance year since 2010. Issuance through the course of 2022 and 2023 had been significantly lighter in comparison to the figures seen in the previous five years, due largely to the strength of municipal balance sheets and the prevailing rate environment. There were signals however that 2024 would see heightened activity, primarily an exceptionally active end to 2023 which saw 32% of the year's total supply completed in November and December.

The 2024 funding year got off to a momentous start, with January 2024 seeing the highest municipal & agency volumes on record for that month. This trend continued through the winter and spring months, with issuance tracking ~2.6x ahead of the 2023 pace by the end of April 2024. Notably, this included the City of Calgary completing its inaugural offering in the market in March of 2024 via a C$180 million 10-year. The summer months saw a similar pace, with issuers highly active through the months of May, June, and July despite historical trends implying a slowdown come the second half of June. It wasn't until August that the market took a break, with that month marking the first and only month of the year without a municipal & agency offering. The Fall/Winter period likewise remained active with issuers utilizing available windows up to the Christmas holidays as City of Regina priced its first bullet offering on record in December.

Issuers during the year were generally greeted by strong investor support. The broader market sentiment throughout large swathes of 2024 was that the Federal Reserve and Bank of Canada would begin aggressive rate cutting cycles during the second half of the year. As a result, investors were eager to deploy available capital, and particularly to municipal & agency names which provided diversification amid a heavy pipeline of provincial issuance.

The demand picture seen throughout the year helped to provide significant support for the municipal & agency basis. Generally, credit spreads versus Ontario (or home provinces) were little changed through the course of the year, this was despite issuance trending significantly higher than in prior years. Also beneficial was the performance of the underlying Ontario credit curve, which remained largely stable throughout the year, and began to see strong performance in Q4 which benefitted issuers later in the year. Perhaps the most notable aspect of the funding equation for issuers during the year was the significant rally that took place through the third quarter of the year as the Fed began to signal that it would begin cutting rates, while US inflation showed signs of subsiding and the US labour market began to show cracks.

The municipal & agency market continued to build up in terms of liquidity as well, with municipal & agency sector trading volumes reaching their highest level on record in 2024 at C$49.4 billion. Total trading increased by 19.7% versus the prior year's volumes of C$41.2 billion. This also marked the fifth straight year that volumes were in excess of C$40.0 billion. Liquidity in the broader sector has displayed a remarkable improvement over the last decade, with municipal & agency trading totalling just C$26.3 billion in 2014.

ESG remained a significant theme in the municipal & agency market during 2024, with nine offerings completed for C$3.0 billion during the year.[1] City of Toronto completed both a Social Bond offering as well as a Green Bond offering, and were joined by TransLink in the Green space, while Ottawa, MFABC, and FNFA completed Sustainability bonds. Canadian municipal & agency issuers have been and continue to be leaders in ESG issuance in the Canadian market.

RBC's 2024 Municipal and Agency Treasurers Roundtable saw representatives from the Cities of Toronto, Ottawa, Montreal and Vancouver, alongside Region of York and Region of Waterloo, as well as MFABC and TransLink meet to discuss relevant topics. This year's key themes included inflation, ESG leadership, the capital projects pipeline, and liquidity strategies for debt issuance programs.

Notably, RBC continued to be the top ranked dealer in the Canadian Public Sector market, achieving a #1 standing on the Government Table (ex. Quebec) for the 7th straight year. RBC finished the year with a C$3.4 billion lead over #2 and a 24.3% market share. In addition to working closely with municipal and agency issuers throughout the year, RBC also secured the first non-NBF led Province of Quebec domestic deal in 2024. This marked the first time a dealer other than National Bank led a domestic Quebec offering since 1978, a major milestone in the market. RBC was also mandated on other landmark transactions including both of the Government of Canada's Green Bond offerings during the year, the City of Calgary's inaugural bond offering, City of Regina's inaugural bullet bond offering, and City of Ottawa's inaugural Sustainability Bond. RBC continues to remain a thought leader in the Public Sector space, having hosted its annual Sustainable Debt Symposium, Public Sector Roundtable, Municipal & Agencies Conference Symposium, Canada Day in Tokyo and Canada Day in London Events.

As we move through 2025 there remain many of the same questions as when we entered 2024. This includes the cadence and depth of the Bank of Canada and FOMC's cutting cycle, and whether the central banks will achieve a soft landing. Additionally, we will see a change in the US administration which is likely to result in changes to foreign and economic policy that could have material impacts on the market backdrop. RBC strives to provide best in class coverage to its municipal & agency partners so that they can stay in front of market impacts and make informed decisions. RBC is a proud partner of the municipal & agency sector in Canada and is looking forward to continued success in 2025.

As always, we thank our Canadian municipal & agency partners for their continued confidence in RBC.

Regards,
RBC Team

1. Source: Bloomberg GSSS Bonds

Municipal & Agencies Sector Overview

Canadian municipal & agency issuers typically issue bullet bonds, also called sinking fund debentures, across benchmark terms. Issuance is typically concentrated in the 10 and 30-year part of the curve although select issuers such as Municipal Finance Authority of British Columbia ("MFABC"), City of Montreal, City of Toronto and Region of York have capitalized on demand in 5 and 20-year terms, as part of their overall borrowing strategy. 1-10 and 1-20 year serial debenture transactions remain a core part of the funding strategy for various regional municipalities in Ontario such as Durham, Halton, London, Niagara and Waterloo who have more modest borrowing needs and do not wish to maintain a sinking fund.

Core Investment Highlights

1. Stable credit ratings across sector ranging from AA to AAA
2. Attractive valuations relative to provincial credit
3. Breadth of available tenors from 5 to 30 years
4. Strong provincial legislative oversight
5. Prudent fiscal management and balanced operating budgets
6. Modest debt burden and strong liquidity positions

Transaction sizes for municipal & agency bullet bonds range from C$50 million on the smaller end to C$500 million benchmark issues. A number of municipalities issue instalment debentures or serials with sizes ranging from $10 million to $80 million, recognizing that larger issue sizes are generally better tailored to the bullet format.

While there isn't an explicit provincial or federal guarantee backing Canadian municipalities, most provinces have a principle statute that establishes the revenue-raising powers and expenditure responsibilities of the municipalities within their jurisdictions. There has not been a case of a Canadian municipality defaulting on capital markets debenture interest / principal payments in the recent past.

Municipalities in Canada are prohibited from funding operating deficits with debt issuance. Municipal debt issuance is primarily used to finance long-term capital investments in water, waste water systems, roads, bridges and other capital assets. Canadian municipalities have sufficient revenue and expenditure autonomy to manage their budgets. The main municipal revenue sources are property taxes, development charges, water and sewer fees, investment income and provincial and federal grants/transfers.

Municipal debt offers investors the opportunity to gain exposure to local government debt at a spread pickup relative to Government of Canada debt and the host province given that municipalities typically trade back of the home province.

The most frequent Canadian municipal & agency borrowers maintain credit ratings ranging from "AA" to "AAA". The rating agencies commonly cite prudent fiscal management, strong liquidity positions, modest debt loads, and capacity to raise tax revenues as credit strengths for the sector.

2. PUBLIC SECTOR ISSUANCE

Issuance from Canadian Public Sector entities reached a record C$288.0 billion across domestic and offshore markets in 2024, up from the C$211.8 billion seen in 2023 and ahead of the prior record of C$265.5 billion seen in 2020. Of the total funding seen during the year, 35% (C$99.6 billion equiv.) was completed outside of Canada, representing a high water mark on both a notional and percentage basis. Domestic funding of C$193.5 billion also represented a record for issuance in the Canadian market and surpassed the prior record of C$183.7 billion that had been set in 2020.

The record volumes seen during 2024 were driven by heightened provincial, municipal & agency, and crown borrowing. Provincial issuance across all currencies increased by 60% on a calendar year basis as issuers looked to front-load offerings during the early portions of the year. Meanwhile, issuance in the crowns sector increased 31% as the Government of Canada completed two Green bond offerings totalling C$6.0 billion in addition to a US$3.0 billion 5-year benchmark issue. Additionally, Canada Housing Trust printed C$60.0 billion, up from C$45.0 billion in 2023, and Maritime Link Financing Trust returned to the market for a C$500 million offering. Notably, Municipal & agency issuance (ex. PQ auctions) increased to C$5.8 billion an increase of 52.2% versus the C$3.8 billion seen during 2023. This marked the 2nd highest level for non-PQ auction municipal & agency issuance in record, just below the C$5.9 billion seen during 2021. Quebec auction issuers also completed C$5.1 billion in 2024, marking a fresh record high for issuance. The uptick in issuance coincided with strong demand for bonds in the Quebec auction market.

Provincial volumes totalled C$148.9 billion across all currencies during the year as issuers front-loaded borrowing ahead off the US Election in November. The 2024 figure was just C$1.1 billion shy of the record C$150 billion seen in 2020 and was 60.1% higher than 2023 which totalled C$93.0 billion. Alongside heightened total volumes, 2024 also marked a record year for offshore issuance from Provincial issuers with C$50.8 billion completed in total, well above the C$18.6 billion seen in 2023. Offshore funding represented ~34% of all provincial funding, the highest level in over a decade as arbitrage levels remained favourable and issuers looked to diversify funding currencies.

The Canadian SSA (ex. GoC) market continued to be a source of growth for public sector borrowing as programs continued to expand alongside increasing AUM. The sector accounted for C$40.4 billion of total issuance, marking the fourth year in a row of expanding issuance volumes for the sector. Canadian SSA Issuers remain a large component of offshore issuance, with ~C$26 billion (64%) completed outside of Canada. USD remained the currency of choice at 29.4% of volumes, however AUD issuance saw a notable increase in activity to account for 16.6% of activity.

The Maple SSA market had its lightest year since 2017 as C$3.7 billion in total supply was completed during the year, ~50% lower than the C$10.05 billion seen during 2023.

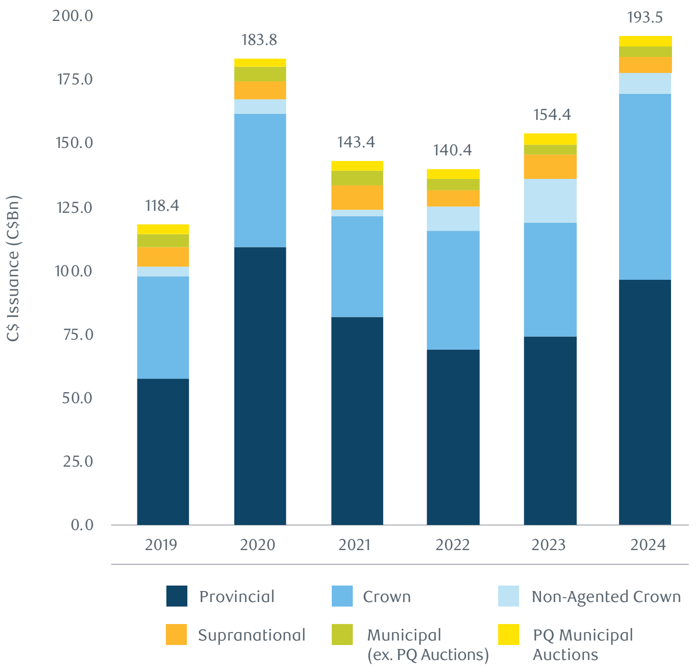
Municipal & agency supply rebounded during 2024 with C$5.8 billion completed as issuers returned to the market amid a strong demand backdrop and increased capital funding needs. The year started on strong footing, with the most active January on record for the municipal & agency space. A strong pace of issuance continued throughout the year, with issuers able to tap into an eager investor base and constructive issuance environment. Quebec auction issuers also completed C$5.1 billion in 2024, marking a fresh record high for issuance. The uptick in issuance coincided with strong demand for bonds in the Quebec auction market.

Canada Housing Trust completed C$60.0 billion during 2024, with 50% purchased by the Bank of Canada on behalf of the Department of Finance. This marked the first year that the program completed C$60.0 billion of total funding, surpassing the prior record of C$53.0 billion printed during COVID (2020).

In the Canada Public Sector space, total Green, Social, Sustainability & Sustainability-Linked (GSSS) Bond supply reached ~C$16.5 billion, of which C$10 billion was from Green Bonds, on par with the C$16 billion seen in 2023 and lower than the C$22.7 billion peak seen in 2022. Municipal and agency ESG issuances accounted for ~C$3.0 billion1 of the volume, almost double the C$1.8 billion seen last year. In 2024, near 50% of aggregate municipal and agency offerings were printed in ESG format, slightly higher than the 48% seen in 2023.

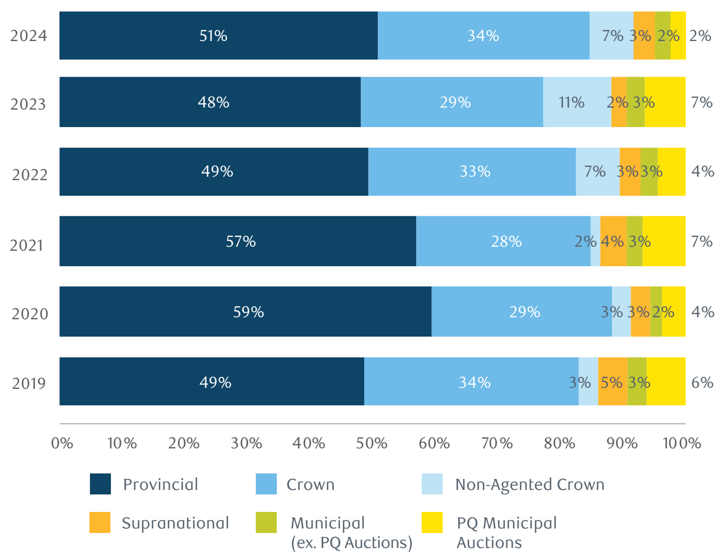
While volumes across a variety of sectors increased materially, spread performance was little impacted and spreads ultimately ended the year tighter. There was a strong demand backdrop through the course of the year that allowed issuers across sectors to see heightened supply digested in an orderly fashion. For investors, many saw the aggressive cutting cycles that were expected to be undertaken by the BoC and FOMC as leading to potentially lower all-in yields and therefore were opportunistic in participating in new issue transactions.

FIGURE 1: C$ DEBT ISSUANCE COMPOSITION (EX. SOVEREIGN DEBT)[1]



Source: RBC Capital Markets

FIGURE 2: C$ DEBT ISSUANCE COMPOSITION BREAKDOWN



Source: RBC Capital Markets

In total, municipalities & agencies accounted for 5.6% of the issuance volumes seen in 2024, above the 5.3% that they represented in 2023. Broken down further, Quebec municipal auction offerings represented 2.6% of issuance while non-auction offerings accounted for 3.0%.

Historically, non-auction offerings have accounted to 3-4% of total issuance, with 2023 representing the low water mark at 2.5%. Meanwhile, auction based offerings have historically ranged from 1.9-3.2% with recent years in the 2.6%-2.8% range. This most recent year marked a record for Quebec based municipal offerings and the 2nd busiest year on record for non-auction offerings, though the broader market also saw heightened volumes meaning that the overall share of municipal & agency issuance was little changed year-on-year.

3. MUNICIPAL & AGENCY SUPPLY OVERVIEW (EX. PQ AUCTIONS)

Municipal & Agency sector issuance (ex. PQ auctions) totalled C$5.8 billion in 2024, an increase of 52.2% from the C$3.8 billion seen in 2023. This marked the second most active year for municipal & agency issuance (ex. PQ), and was just behind the C$5.9 billion seen in 2021. Heightened issuance was assisted by a number of factors, including but not limited to:

- Significant investor demand which underpinned spreads versus provincials
- A declining and attractive yield environment for large stretches of the year
- Strong capital funding requirements at the municipal level
- New and/or dormant issuers accessing the market
- Larger borrowing programs for established issuers

In total, 18 separate issuers accessed the market in 2024. Of these 18, eight had not accessed the market in 2023. This breadth of issuance provided investors with significant diversification, and also marked a return to the levels of issuer participation seen in 2019 & 2020 where 19 issuers accessed the market. This included the City of Calgary (inaugural), City of Peterborough (since 2018), City of Regina (since 2019), City of Saskatoon (since 2014), City of Winnipeg (since 2020), FNFA (since 2022), Region of Durham (since 2022), and Region of Niagara (since 2022).

In addition to the eight issuers who returned to the market in 2024, an additional six of the repeat issuers saw heightened issuance during the year. This included Ville de Montreal (C$1.0 billion | +22%), MFABC (C$1.3 billion | +17.6%), City of Ottawa (C$225 million | +13%), City of Vancouver (C$125 million | +25%), Region of Halton (C$132 million | +141%), Region of Waterloo (C$114 million | +90%), City of London (C$30 million | +40%).

The 2024 lineup of issuers was also notable given the milestones for a number of municipal issuers, including:

- Jan-2024 - City of Winnipeg's C$200 million 40-year: Marked Winnipeg's largest transaction on record, and also one of the few syndicated ultra-long offerings in the domestic market (RBC JL)
- Feb-2024 - City of Calgary's C$180 million 10-year: Represented the City's inaugural bond offering in the debt capital markets (RBC JL)
- Jun-2024 - City of Saskatoon's C$48.4 million 1-10 year Serial: The transaction was the City's return to the market for the first time since 2014 (RBC Lead)
- Sep-2024 - City of Ottawa's C$225 million 10-year: Marked Ottawa's inaugural Sustainability Bond following the release of its Sustainability Framework in February 2024 (RBC JLM & B&D)
- Dec-2024 - City of Regina's C$100 million 30-year: Represented Regina's inaugural bullet bond offering, and achieved the lowest 30-year municipal re-offer yield since TransLink's 30-year in 2022 (RBC Sole Lead)

Issuers through the course of 2024 benefited from a strong investor backdrop which helped to keep spreads underpinned during the course of the year. As market participants formed views around the pace of potential rate cuts from the BoC and FOMC, investors displayed an eagerness to put money to work in the municipal & agency market. Issuers were also the beneficiaries of a strong rally in rates during the third quarter of the year, which assisted issuers in achieving attractive re-offer yields. Notably, the City of Regina offering achieved the lowest re-offer yield on a 30-year municipal & agency bond offering since TransLink's 30-year offering in December 2022.

The heightened municipal & agency issuance also helped investors to diversify holdings amid a surge in provincial issuance during the year. Municipal & agency issuers also provided to investors consistent spread versus provincials in addition to a strong and stable ratings profile.

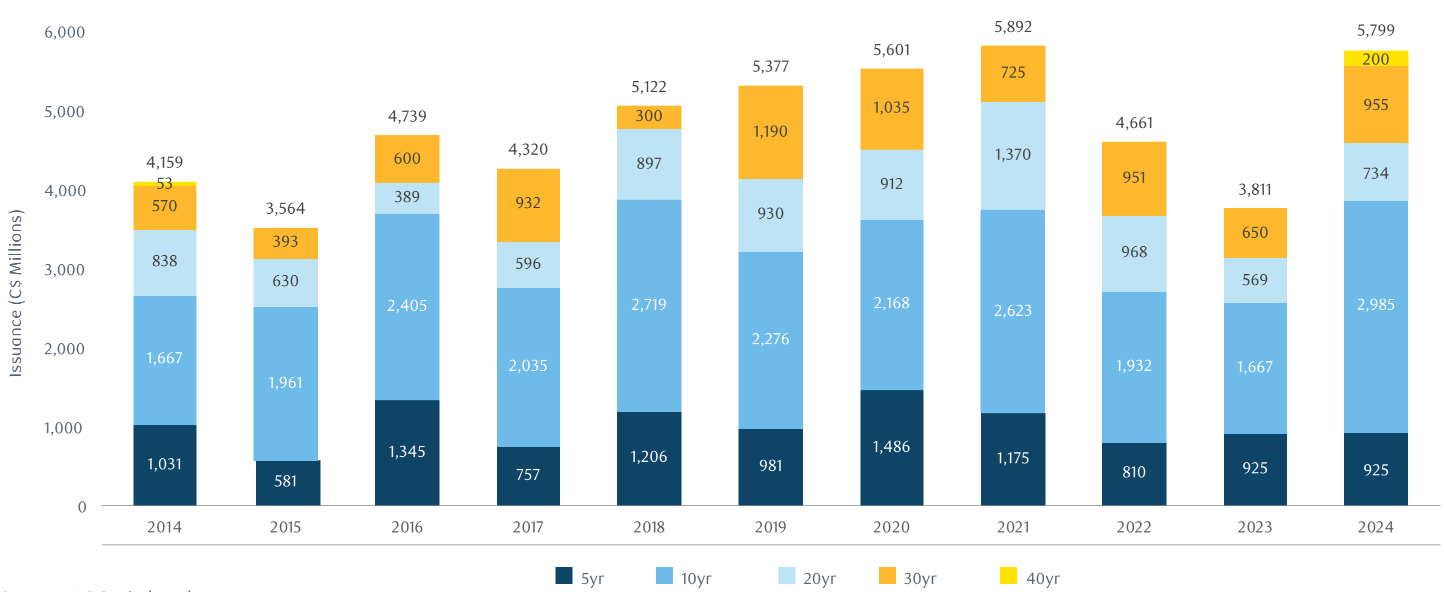
ESG also continued to be topical during the year, with municipal & agency issuers completing C$3.0 billion of GSSS issuance across 9 transactions.1 This included Ottawa's inaugural Sustainability Bond, as well as Green and Social offerings from City of Toronto, a Green Bond offering from TransLink, and Sustainability issues from MFABC and FNFA. In all, we saw four Sustainability offerings, two Green offerings, and one Social bond offering.

3.1. Municipal & Agency Bond Market Snapshot (ex. PQ Auctions)

Issuance has remained strong as various municipalities capitalize on opportunities in the debt capital markets to finance ongoing infrastructure and capital needs. Below are the core features of the Canadian municipal & agencies bond market.

	Description
Market Size	C$4+ billion in issuance per year
# Issuers	~15 core repeat issuers
Guarantee	No explicit Provincial or Federal guarantee
Ratings	Typically AA to AAA by Moody's or S&P; 1-2 ratings per issuer
Structure	▪ Bullets – make up ~90-95% of supply; in Ontario all require sinking fund payments ▪ Serials – most common for less frequent issuers, no sinking fund required ▪ Amortizers – less common but available format
Term:	Typically depends on the project life ▪ Bullets – benchmark terms typically 5yrs, 10yrs, 20yrs and 30yrs ▪ Serials – 1-10yrs, 1-15yrs or 1-20yrs
Use of Proceeds	Fund capital projects such as water, waste water management, roads, transit, housing
Offering Format	Mostly underwritten transactions, select issuers will use an agency book-build process
Prospectus	Municipalities are prospectus exempt issuers
Offering Documentation	Marketed and priced off a Term Sheet and Offering Circular
Execution Timeline	Typically launch and price on the same day following discrete book building process
Pricing	Marketed at a relative spread to the home province
Secondary Trading	~C$10-15 billion per quarter

FIGURE 3: CANADIAN MUNICIPAL & AGENCY DEBT ISSUANCE COMPOSITION (EX. PQ AUCTIONS)



Source: RBC Capital Markets

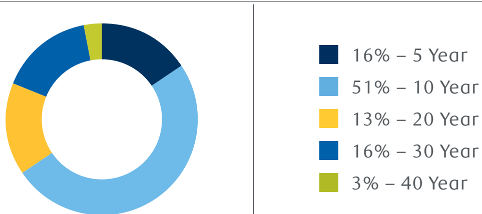
Structure and Term Characteristics

The majority of municipal & agency issuance tends to be in the form of bullet bonds which continue to be the preferred format given size and liquidity requirements. Most Canadian municipalities are required to make sinking fund payments for these sinking fund debentures. Bullet maturities account for ~90-95% of issuance in any given year. In terms of size, bullet issues tend to be ~C$100-$500 million. Bullet bonds are popular across the curve in terms such as 5, 10, 20 and 30 years, though issuers have opportunistically issued as long as 40-years.

In the Canadian municipal & agency space, serial debentures make up the remaining share of issuance volumes and are spread out across different structures based on the useful life of the capital projects being financed. The most common structure is a 1-10 year although 1-15 year and 1-20 year structures are prevalent. Serial debenture transactions tend to be smaller in size, ranging from ~C$20-100 million. A serial structure is made of several debenture lines and each individual maturity serves as a stand-alone bond with a semi-annual coupon. A serial issuer is required to repay interest and principal annually, eliminating the need to maintain a sinking fund to ensure repayment of the principal at maturity. Serial bonds limit refinancing risk by smoothing principal and interest payments over time. The principal repayment obligations on municipal & agency bullet bonds in Canada is typically offset by sinking fund revenues, limiting refinancing risk considerably. Bullet bonds also command a broader investor base than serials.

Municipal & agency issuance in 2024 (ex. PQ auctions) saw increased activity around the 10-year part of the curve which accounted for 51% of all supply. The front-end saw a decline of ~8% of market share, while longer tenors in aggregate saw a bump given the addition of 40-year supply to the market.

FIGURE 4: 2024 ISSUANCE BY TERM (EX. PQ AUCTIONS)



Term Bucket*	% 2024 Supply	% 2023 Supply
5-years	16%	24%
10-years	51%	44%
20-years	13%	15%
30-years	16%	17%
40-years	3%	0%

Source: RBC Capital Markets

* Represents syndicated supply

3.2. Municipal & Agency Bullet Transactions

Bullet issuance in 2024 increased markedly to C$5.4 billion, up from C$3.675 billion in 2023. Bullet bonds accounted for 93% of issuance during the year. The average size of bullet transactions in 2024 was C$269 million, up from C$229 million in 2023 and C$256 million in 2022.

Trade Date	Issuer	Size (C$MM)	Maturity	Term (yrs)	Spread vs. GoC (bps)	Spread vs. ONT (bps)	Re-Offer Yield	Coupon	Sustainability Bond	Green Bond	Social Bond
04-Dec-23	City of Regina	100	18-Dec-54	30	115.5	31.0	4.282%	4.25%	-	-	-
22-Nov-23	City of Montreal	300	01-Dec-43	20	114.5	26.0	4.508%	4.40%	-	-	-
20-Nov-23	City of Toronto	200	02-Dec-34	10	77.5	10.0	4.029%	4.00%	-	✓	-
16-Nov-23	Regional Municipality of Halton	54.647	29-Oct-54	30	128.0	35.0	4.673%	4.65%	-	-	-
07-Nov-23	City of Toronto	200	29-Oct-54	30	119.5	27.0	4.562%	4.55%	-	-	✓
18-Oct-23	City of Vancouver	125	25-Oct-34	10	78.0	12.0	4.029%	4.00%	-	-	-
05-Oct-23	Region of York	100	01-May-34	10	78.5	12.0	3.809%	4.05%	-	-	-
04-Oct-23	City of Ottawa	225	02-Oct-34	10	83.0	10.5	3.785%	3.75%	✓	-	-
15-Sep-23	MFABC	190	03-Dec-34	10	79.0	5.0	3.756%	3.75%	✓	-	-
22-Aug-23	City of Montreal	300	01-Sep-34	10	92.0	21.5	3.892%	3.90%	-	-	-
21-Jun-23	City of Toronto	300	29-Jul-34	10	81.5	13.0	4.294%	4.25%	-	-	-
30-May-23	TransLink	300	14-Jun-55	30	120.5	29.0	4.633%	4.60%	-	✓	-
25-May-23	First Nations Finance Authority	452	01-Jun-34	10	81.5	12.5	4.281%	4.10%	✓	-	-
18-Apr-23	MFABC	695	09-Oct-29	5	40.0	7.0	4.065%	2.55%	✓	-	-
14-Feb-23	City of Toronto	300	15-May-54	30	122.5	28.5	4.937%	4.90%	-	-	-
06-Feb-23	MFABC	415	03-Dec-33	10	75.5	9.0	4.388%	4.05%	✓	-	-
21-Jun-23	City of Calgary	180	01-Jun-34	10	83.0	13.0	4.261%	4.20%	-	-	-
30-May-23	City of Montreal	400	01-Dec-33	20	122.5	27.0	4.698%	4.40%	-	-	-
25-May-23	City of Winnipeg	200	01-Jun-64	40	132.0	41.0	4.696%	4.65%	-	-	-
30-May-23	First Nations Finance Authority	357	01-Jun-34	10	84.0	16.0	4.109%	4.10%	✓	-	-
	Total:	**5,394**							**6**	**2**	**1**

Source: RBC Capital Markets / *Amortizer
*Ex. Quebec Municipal Auctions

3.3. Municipal Serial Transactions

Serial transactions provide an alternative structure to issuers who do not wish to maintain a sinking or retirement fund.

There was C$405 million of serial supply in 2024, up from the C$136 million seen in 2023 and the C$305 million seen in 2022. This marked the 2nd most active year for serial supply on record, just below the C$458 million seen in 2021. Notably, the 1-20 year structure made a significant comeback with four transactions in this term. The Niagara transaction in July 2024 marked the first 1-20 year serial since June 2022. The average deal size for serials in 2024 was C$50.6 million.

Price Date	Issuer	Size (C$MM)	Term (yrs)	Spread vs. GoC	Spread vs. ONT	Re-Offer Yield
19-Nov-24	Regional Municipality of Waterloo	74.00	1-20	14-124	12-32	4.090%
07-Oct-24	Regional Municipality of Durham	56.52	1-20	14-132	12-32	4.330%
30-Jul-24	City of Peterborough	38.80	1-20	-	-	-
09-Jul-24	Regional Municipality Of Niagara	39.80	1-20	14-125	13-33	4.366%
12-Jun-24	City of Saskatoon	48.40	1-10	15-86	10-17	4.080%
22-May-24	Regional Municipality Of Waterloo	40.00	1-15	15-114	10-27.5	4.313%
04-Apr-24	City Of London	30.00	1-10	14.5-86.5	11-16	4.312%
03-Apr-24	Regional Municipality Of Halton	77.48	1-15	14-114.5	14-27	4.342%
	Total:	**404.99**				

Source: RBC Capital Markets

4. CANADIAN VS. U.S. MUNICIPAL BONDS

There is a distinction between Canadian and U.S. municipal bonds and the table below compares and contrasts the two markets for the benefit of our readers.

	Canadian Municipal Bonds	U.S. Municipal Bonds
Issuing Entities	Local and regional governments such as cities and townships and financing authorities that borrow on behalf of other municipalities	Tax-exempt issuers such as state and local governments and eligible not-for-profit corporations like hospitals and colleges
Guarantee Structure	Considered "creatures of the province", no explicit guarantee	No explicit guarantee from the state with minimal exceptions
Taxation Structure	Canadian municipal bonds are not tax exempt for investors	U.S. Municipal bonds can be either Taxable or Tax-Exempt; tax exempt imply that interest payments are exempt from Federal and State Income Taxes for in-state residents
Issue Types	General Obligation	General Obligation or Revenue Bonds; Revenue-backed bonds make up approx. two-thirds of the municipal index
Use of Proceeds	Only used to fund capital projects, cannot be used to fund deficits	Broad variety of uses including funding new capital projects, refinancing existing obligations, funding pension and other post-retirement liabilities, economic developments, etc.
Pricing	Trades at a yield premium to the home province with relative pricing dynamics between similar rated comparable credits	Prices based on comparably rated states, counties, cities, sector, ratings, etc. Taxable municipal bonds viewed as an alternative to comparable quality corporates
Defaults / Bankruptcy	No recent occurrence	Since 1970, there has never been an Aaa-rated municipal bond default; Detroit, Jefferson County and Puerto Rico are most recent examples of distressed US municipals
Market Size	C$4.0+ billion annual issuance; ~C$53 billion outstanding (ex. Quebec Municipal Auction issuers)	US$380+ billion annual issuance; ~US$4.0 trillion outstanding
# Core Issuers	~15 recurring issuers across the different provinces	50,000+ issuers across the United States and Territories
Borrowing Limit	Ontario municipalities are required to have an Annual Repayment Limit (ARL) < 25% of Operating Revenue*	Limits depend on issuer specifics and are outlined in bond issuance enabling documents – may include coverage requirements or additional bonds test
Available Structures	Sinking Fund Debentures (bullets), Serials, Amortizers	Generally amortizing and long term; 30-year level debt structure is very common
Terms	5, 10, 20 and 30 years primarily	Bulk of issuance in 10yr+ terms
Ratings	Mostly rated AA to AAA	90% of municipal issuers are rated single-A or higher
Investor Base	Pension Funds, Asset Managers, Insurance Companies	Primarily Retail Investors/Separately Managed Accounts (45%), Mutual Funds (25%), Arbitrage Accounts (15%), Insurance (15%)
Offshore Issuance	Only issues in CAD but allowed to issue in other currencies	Only USD
Call Features	Non-callable	Majority of longer-dated bonds carry a 10-year par call provision
Recent Themes and Developments	Active issuance market averaging ~C$5.2 billion per year (ex. Quebec Auctions) from 2019-2024. Municipalities are active in ESG issuance with established Green Bond programs. We have seen regular issuance of Green, Social, and Sustainable Bonds in the Municipal Sector	After record issuance in 2024, the U.S. municipal bond market is expected to continue issuance path in 2025. The municipal market faces rate volatility and uncertainty given Fed outlook and economic performance. There will be significant focus on Trump Administration policies that will impact federal funding for local government projects as well as the status of tax-exemption for municipal bonds.

* Other than the City of Toronto

In terms of liquidity and reserves, Canadian municipalities tend to maintain a much larger pool of reserves, as a % of their operating budget. U.S. municipalities tend to keep less than 10% of the operating budget in the form of reserves for short-term liquidity while we see a much higher proportion (30%+) amongst Canadian municipalities.

U.S. municipalities are also burdened with significant pension and healthcare obligations and the market is moving in a direction that requests entities to provide more financial disclosure on the obligations. U.S. municipalities are faced with systemic gaps for pension and healthcare liabilities.

There have been multiple instances of U.S. municipalities running into financial difficulty including Jefferson County, Alabama; Stockton, California; Detroit, Michigan; and more recently Hartford, Connecticut. In contrast, there have been no instances of Canadian municipalities running into these types of financial difficulties in recent history.

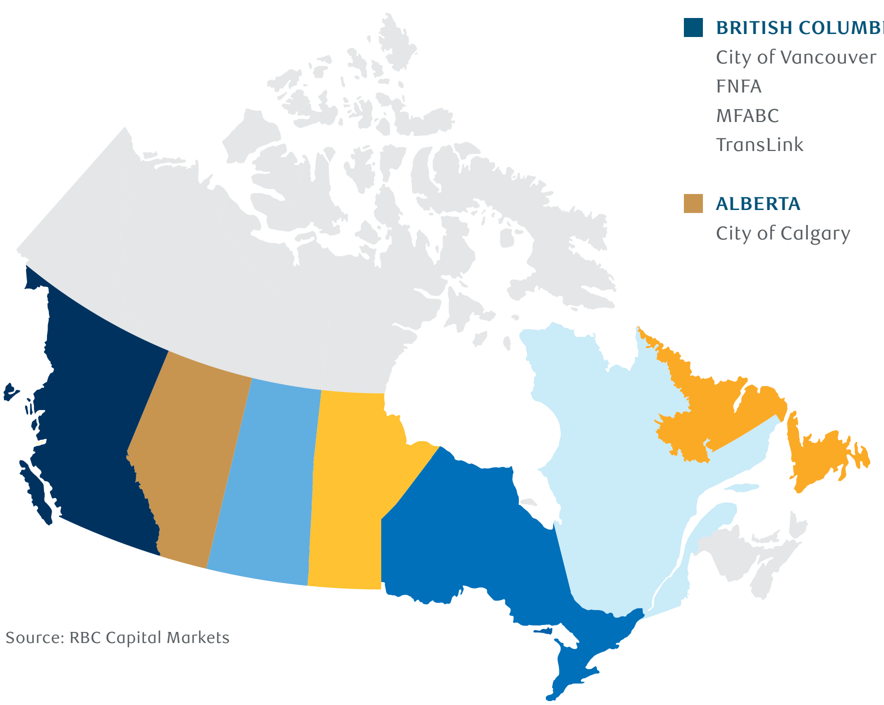
5. MUNICIPAL & AGENCY ISSUERS

Below is a list of the municipal and agency issuers that have issued bonds in the Canadian market in the past 5 years and have at least C$50 million in outstanding debentures. While the majority of the municipalities fund capital projects either through the Province or through a Provincially-funded Financing Authority, the issuers listed below fund in their own name.

BRITISH COLUMBIA	ALBERTA	SASKATCHEWAN	MANITOBA	ONTARIO	QUEBEC[3]	NEWFOUNDLAND & LABRADOR
▪ City of Vancouver ▪ FNFA[2] ▪ MFABC ▪ TransLink[1]	▪ City of Calgary	▪ City of Regina ▪ City of Saskatoon	▪ City of Winnipeg	▪ City of Barrie ▪ City of Guelph ▪ City of Hamilton ▪ City of London ▪ City of Ottawa ▪ City of Peterborough ▪ City of Sudbury ▪ City of Toronto ▪ Region of Durham ▪ Region of Halton ▪ Region of Niagara ▪ Region of Peel ▪ Region of Waterloo ▪ Region of York	▪ Ville de Laval ▪ Ville de Montreal ▪ Ville de Quebec	▪ City of St. John's

(1) TransLink, formerly known as South Coast British Columbia Transportation Authority, is Metro Vancouver's transportation network. Although TransLink is not a municipality, investors compare TransLink bonds to other similar-rated municipalities
(2) FNFA, First Nations Finance Authority, is not a municipality but investors will compare FNFA to other similar-rated municipalities
(3) This list of Quebec municipalities excludes unrated Quebec municipalities that generally issue serials via an auction process

FIGURE 5: MOST ACTIVE CANADIAN MUNICIPAL & AGENCY ISSUERS[4]



BRITISH COLUMBIA
City of Vancouver
FNFA
MFABC
TransLink

ALBERTA
City of Calgary

SASKATCHEWAN
City of Regina

MANITOBA
City of Winnipeg

ONTARIO
City of Barrie
City of Guelph
City of Hamilton
City of London
City of Ottawa
City of Peterborough
City of Sudbury
City of Toronto
Region of Durham
Region of Halton
Region of Niagara
Region of Peel
Region of Waterloo
Region of York

QUEBEC
Ville de Laval
Ville de Montreal
Ville de Quebec

NEWFOUNDLAND & LABRADOR
City of St. John's

Source: RBC Capital Markets

5.1 Municipal Funding Options

Municipalities have several funding options:

- Direct debenture issuance in the market as a stand-alone issuer
- Borrowing through a non-guaranteed pooled entity (i.e. MFABC) or Ontario regional municipalities
- Provinces or provincial entities issue debt directly and then on-lend the funds to these local entities (i.e. Alberta Capital Finance Authority, New Brunswick Municipal Finance Corp, Nova Scotia Municipal Finance Corp or Infrastructure Ontario)
- There are provincially sponsored borrowing authorities that fund for the municipalities. They are not directly active in the Capital Markets.
- Nova Scotia Municipal Finance Corporation (NSMFC) – Provincially guaranteed municipal borrowing authority which has most recently been funded by the Province; last issuance in the public market was in 2006
- New Brunswick Municipal Finance Corporation (NBMFC) - Provincially guaranteed by the Province of New Brunswick. Last issuance in the public market was in 2014
- Infrastructure Ontario - Offers a loan program that provides affordable long-term financing to public sector clients to modernize and renew their infrastructure; Province of Ontario borrows on behalf of Infrastructure Ontario

5.2 Quebec Municipalities

Municipalities within the Province of Quebec are active issuers of publicly traded debt. Over 1,100 municipalities and municipal agencies issue serial bonds through the Quebec auction process.

None of the issuers have an external rating except for the three largest municipalities; Montréal, Québec, and Laval. While the bonds issued through the auction process are fragmented and modest in size, the auction bonds sector accounted for ~C$5.1 billion in aggregate issuance in 2024. This was up ~15% from the C$4.4 billion completed through the auction process in 2023. The City of Montreal also issued C$1.0 billion via a syndicated process spread during the year.

The municipalities are obligated to present a balanced budget every year. Each municipality's budget must be approved by the Ministry of Municipal Affairs and Housing of the Province. Municipalities can carry-out their financing only once they received a certificate of approval of the borrowing by the Ministry of Finance of the Province of Quebec (MFQ). The bond auction process is managed and supervised by the MFQ. Municipality's offerings are available on MFQ website in pre-determined schedules that are updated weekly, and the bond auction takes place at 11am ET. Each offering contains several tranches with tenors ranging from 1-year to 10-years. Average spreads at the auctions in 2024 have been between +20 bps (Montreal) to +50 / 85bps (unrated municipality) over the Province of Quebec curve. The MFQ's certificate of validity is affixed to every bond security issued. RBC is an active bidder in the auctions and has succeeded to gain market share and finished top-2 among the 5 major Canadian Banks in 2024. Below is a list of the Top 10 largest Quebec municipalities.

TOP 10 LARGEST QUEBEC MUNICIPALITIES

#	Issuer	Ratings (D/M/S)	Outstanding (C$MM)
1	City of Montreal	(A(H)/Aa2/AA)	11,063.3
2	Quebec City	(-/Aa2/-)	1,907.1
3	Ville de Laval	(-/-/AA+)	910.4
4	Ville de Longueuil	(-/-/-)	675.4
5	Ville de Terrebonne	(-/-/-)	584.7
6	Ville de Saguenay	(-/-/-)	570.7
7	Ville de Levis	(-/-/-)	570.6
8	Ville de Sherbrooke	(-/-/-)	524.2
9	Ville de Gatineau	(-/-/-)	516.9
10	Ville de Trois-Rivieres	(-/-/-)	359.5

As of January 2025

5.3 Select Municipal & Agency Issuer Highlights

	Municipal Finance Authority of BC	Toronto	Montréal	FNFA	TransLink
Type	Agency	Municipality	Municipality	Agency	Agency
Ratings	Aaa/AAA	AA/Aa1/AA+	A(H)/Aa2/AA	AA(L)/Aa3/AA-	AA/Aa2/-
Typical Annual Borrowing Req. (C$MM)	1,200-2,000	950-1,200	650-1,300	300-800	300-650
2024 Debenture Funding	C$1.3 billion	C$1.0 billion	C$1.0 billion	C$809 million	C$300 million
Typical # Annual Issues	3-4	4-5	2-4	1-2	1-2
Typical Maturities	5-year 10-year	10-year 20-year 30-year	10-year 20-year	10-year	30-year
Public Debt Outstanding (C$MM)	9,364	11,049	11,444	2,834	3,380

Select New and Return Issuers

	Calgary	Regina	City of Saskatoon
Ratings	Aaa/AAA	AAA	AAA
Typical Annual Borrowing Req. (C$MM)	180	<100	<50
2024 Debenture Funding	C$180 million	C$100 million	C$48.4 million
Typical # Annual Issues	1	1	1
Typical Maturities	10-year	30-year & Serial	Serial
Public Debt Outstanding (C$MM)	180	180	93.4

5.4. Top 12 Largest Municipal & Agency Sector Issuers (2020-2024)

The municipal sector (ex. PQ auctions) has a number of repeat issuers which account for a significant portion of supply. The top 3 issuers, Municipal Finance Authority of BC, City of Toronto, and Ville de Montreal have completed ~C$16.7 billion, or ~65% of total issuance from 2020-2024. The top 12 issuers completed a total of C$24.3 billion, or 94.5% of the total issuance during the timeframe.

5.5. Top 12 Municipal & Agency Sector Issuers by Debt Outstanding

The Canadian Municipal & Agency sector has ~C$53.2 billion outstanding (ex. Quebec Municipal Auction issuers). The largest issuers account for a large portion of the overall market, with City of Montreal, City of Toronto, and MFABC accounting for ~60% of the total market outstanding.

5.6. Municipal Finance Authority of British Columbia ("MFABC")

The Municipal Finance Authority of British Columbia ("MFABC" is a regional infrastructure finance agency, supporting the local governments in the Province of British Columbia.

As part of MFABC's emphasis on ESG investing, it provides investors with a loan breakdown and maps the proceeds of its bond issuance to their corresponding United Nations Sustainable Development Goals for each transaction.

MFABC's strong credit attributes and deep liquidity in secondary trading result in many similarities with the Provincial sector in Canada. Unlike municipalities, which can only tax real estate or otherwise raise revenues in their own limited geographic jurisdiction, MFABC has legislated unlimited taxation authority on all real property (both commercial and residential) in the Province of British Columbia. This is a unique credit strength among infrastructure agencies globally. No other "Public Sector Funding Agencies" (PSFA) around the world possess equivalent taxation authority.
In addition to direct taxation power, MFABC's profile as a regional infrastructure finance agency, is further supported by the following facts/features:

- Provincial oversight: The Province of BC is responsible for the financial sustainability of local governments in BC (MFABC's customers). In addition, the Province oversees the MFA Act, which sets local government borrowing limits and provides for provincial oversight.
- Joint & several guarantee: MFABC's borrowers within a regional district are jointly and severally liable for each other's debts.
- Capitalization & performance history: MFABC has set its own capital policy far above its legislated 1% Debt Reserve Fund and has never experienced a credit loss in its 50-year history.
- Various international central banks, insurance companies and banks apply favourable quality levels to MFA BC bonds for regulatory capital purposes.
- Secondary market liquidity: MFABC bonds are generally more liquid than many smaller provincial bullet bond programs and typically far more liquid than the vast majority of bonds in the Canadian municipal sector.

These unique characteristics lead many investors to view MFABC as a regional government infrastructure finance agency with direct taxation powers across the Province of British Columbia.

TOP 12 LARGEST MUNICIPAL & AGENCY SECTOR ISSUERS

#	Issuer	Amount Issued (C$MM)
1	MFABC	$6,725
2	City of Toronto	$5,180
3	Ville de Montreal	$4,810
4	First Nations Finance Authority	$1,757
5	TransLink	$1,550
6	City of Ottawa	$1,236
7	Region of York	$960
8	City of Vancouver	$545
9	Region of Peel	$498
10	Region of Waterloo	$438
11	City of Sudbury	$303
12	City of Winnipeg	$285

Excludes Quebec Auction Issuers

TOP 12 MUNICIPAL & AGENCY SECTOR ISSUERS BY DEBT OUTSTANDING

#	Issuer	Amount Outstanding (C$MM)
1	City of Montreal	$11,444
2	City of Toronto	$11,049
3	MFABC	$9,364
4	Regional Municipality of York	$3,664
5	TransLink	$3,380
6	City of Ottawa	$3,371
7	First Nations Finance Authority	$2,834
8	Region of Peel	$1,788
9	City of Winnipeg	$1,333
10	City of Vancouver	$1,115
11	Regional Municipality of Waterloo	$821
12	Region of Halton	$555

Excludes Quebec Auction Issuers

As of January 2024

6. INVESTOR DYNAMICS AND RELATIVE PRICING

Municipal spreads trade off underlying Provincial spreads and typically move in line with the underlying benchmarks. Investor demand for municipal paper has been growing as the buyer universe continues to expand and appetite for the product grows. There has been increased interest from new types of accounts such as corporate buyers who have expanded their mandates and see attractive relative value dynamics in the municipal sector.

6.1. Municipal & Agency Sector Investor Base Overview

There is a diverse range of municipal & agency bond buyers in Canada that participate in municipal & agency transactions because it offers term sector diversification, ratings strength and attractive pricing dynamics. While most buyers tend to be buy-and-hold investors, a number of accounts trade the bonds to support new issues or to express relative value and yield curve dynamics.

The most common categories of accounts that participate in municipal & agency transactions:

- **Insurance Companies:** Active participants in the municipal & agency space and while some of them prefer the liquidity of bullet issues, others prefer to participate in serial transactions because of the suitability of non-benchmark lines for their actuarial requirements
- **Pension Funds & Asset Managers:** Active participants of the sector that express sizable demand for benchmark transactions and tend to participate primarily in bullet issues; these accounts tend to look for relative value across similar products such as provincials, crowns, regulated utilities and are focused on liquidity
- **Central Banks:** Participate in large benchmark issues of higher rated entities provided that the issue has at least C$500 million outstanding, typically short-end of the curve
- **Municipal Sinking Funds:** Since municipalities maintain large sinking and reserve funds against outstanding maturities, they actively invest funds and support new issues in the sector by participating in municipal & agency transactions
- **Money Market Funds:** Smaller asset managers that typically participate in the short-end of the curve and will buy serials and bullets, though mostly shorter-dated lines

6.2. Spread Performance

Credit spreads for Canadian municipal issuers are typically expressed as a spread versus the Province of Ontario, or versus their home province (British Columbia or Quebec). However, the overall cost of funding for Canadian municipal issuers is a function of the underlying Government of Canada ("GoC") yield curve, provincial credit spreads, and the municipality's spread versus its home province.

Municipal credit spreads react to many of the same factors that impact global credit markets. This includes shifts in risk-sentiment which can occur for a variety of reasons, such as central bank decisions, inflation, commodity shocks, geopolitical concerns, and the broader economic outlook. Movement in municipal credit spreads can sometimes be greater impacted by shifts in risk sentiment, as municipal paper, while highly rated, is often less liquid than provincial or crown paper. Liquidity in recent years has become a focal point for investors given the heightened volatility in broader markets.

The municipal credit basis showed remarkable resiliency in 2024. New issuance volumes reached their second highest level on record and the market continued to contend with shifting views on central bank policy. Through 2024, municipal credit spreads versus Ontario were slightly tighter in 10-years, and ~2-4bps tighter in 30-years.

Investors were keen to put cash to work in the municipal market through the course of 2024 alongside the prospect of a lower yield environment, particularly once central bank cutting cycles came into full force. Helping to drive demand for municipal product as well, was an active pipeline of provincial issuance from which municipal names offered a healthy dose of diversification. Additionally, consistent spreads above provincials and attractive re-offer yields helped contribute to strong investor demand for municipals throughout the year.

The key theme of 2024 was shifting narratives around inflation and the interest rate cycles for various central banks. Through the spring months of the year, market participants and bank economists alike attempted to predict when central banks would make their first cutting moves. In June 2024 the Bank of Canada was the first of the G7 countries to cut its overnight rate, having administered a 25bp cut to bring the rate to 4.75%. The US Federal Reserve in contrast did not begin cutting rates until September 2024 when it administered an upsized 50bps cut in light of a softening labour backdrop. By the end of 2024 the Bank of Canada had administered 175bps worth of cuts, including two 50bp cuts in October and December. The Federal Reserve meanwhile administered 100bps of cuts including one 50bp cut in September.

While cuts were largely expected, the magnitude and consistency by which they were delivered was the subject of significant debate. This debate largely played out in front-end markets, however the inflation and growth views that informed these changes to central bank rates often also had impacts to the longer-term funding curve. Often, this meant shifts in the underlying rates that municipal issuers utilized to complete offerings. Through the course of 2024 the 10-year Canada yield experienced 16 periods where yields shifted 20bps or more, including a 75bp move lower between July and mid-September. Ultimately, 10-year GoC yields ended the year ~4bps higher while 30-year yields were ~23bps higher as the Canada curve re-steepened. In contrast to this volatility, the municipal credit basis versus Ontario traded within a 3-5bp band through the course of the year.

Notably, through the first half of 2024, the 5-30 year portions of the GoC yield curve were inverted, with a positive slope re-emerging in July. This inversion had an impact on the funding costs for different terms, with the Canada yield for longer dated bonds actually lower than those in shorter dates. This meant that demand was generally skewed to shorter dated bonds unless credit spreads compensated for the differential in the underlying yield curve. This trend largely continued until a positive slope between 5 and 30-year Government of Canada bonds emerged in July of 2024.

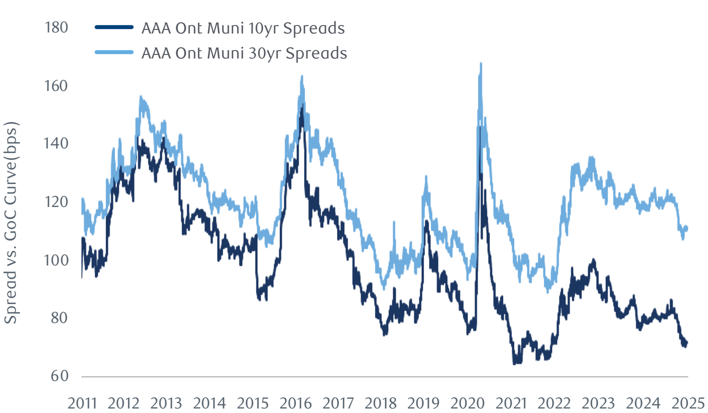
The underlying provincial credit curve, which forms another key component of municipal funding levels, also performed well in light of the general appetite for highly rated credit. Provincials had their most active year on record globally, and 2nd most active year on record in the domestic market. Despite this, the underlying Ontario curve tightened ~5bps in 10-years and ~4bps in 30-years over the course of 2024. The strong performance of the underlying provincial curve also assisted municipal issuers to keep the overall credit component of their funding cost to historically tight levels.

Issuers through the course of the year saw funding levels vary depending on when they issued. At the beginning of 2024, funding costs for a typical AAA Ontario municipality in the 10-year part of the curve were ~3.96%, while 30-year funding would have been ~4.46%. The highest 10-year funding cost would have been 4.7% while 30-year funding would have reached 5.1% (April 2024). The lowest indicative re-offer yields were seen in early December at 3.69% for 10-years and 4.42% for 30-years. Re-offer yields ended 2024 at 3.95% for 10-years and 4.7% for 30-years. As mentioned above, municipal credit spreads versus Ontario through the year were highly resilient, ending the year slightly tighter in 10-years, and ~2-4bps tighter in 30-years.

The investor base continued to display a preference for liquidity on new issues. During periods of heightened volatility such as those seen during the pandemic, but also portions of 2024, we have seen investors place a significant emphasis on liquidity. The ability for investors to trade product in line with their portfolio views becomes paramount when rates are shifting considerably in short periods of time. Liquidity demands from investors have meant that there has been investor preference for issuers to build larger, more liquid benchmarks. Likewise, the larger bonds outstanding typically have outperformed smaller offerings as investors display their liquidity preference. By extension, during periods of volatility we have also typically seen greater spread requirements from investors on serial offerings.

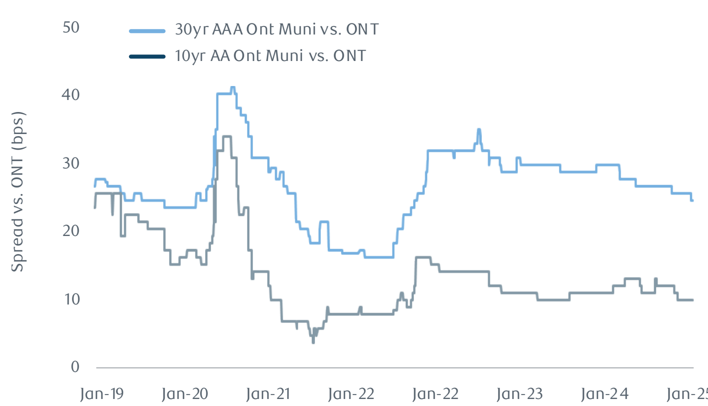
The charts below illustrate the performance of municipal spreads throughout 2024.

FIGURE 6: MUNICIPAL SPREAD PERFORMANCE VS. GOC



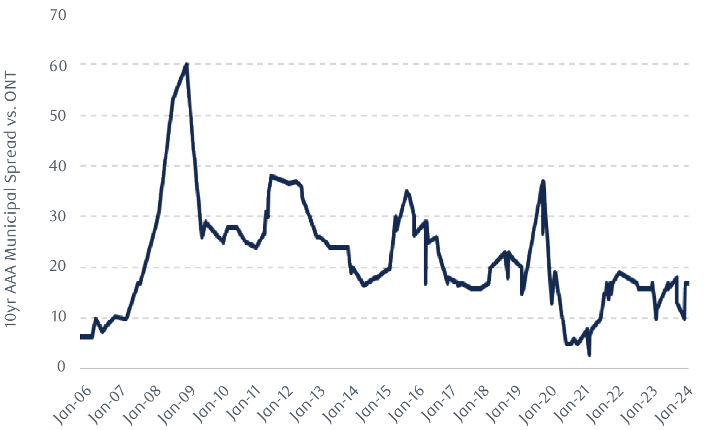
Source: RBC Capital Markets; spread levels as of January 2025

FIGURE 7: MUNICIPAL SPREAD PERFORMANCE VS. GOC



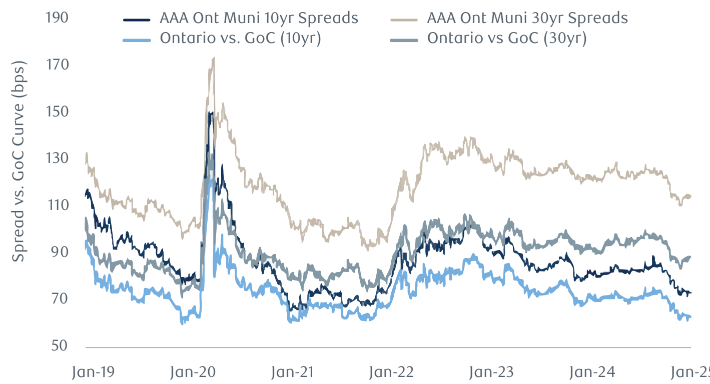
Source: RBC Capital Markets; spread levels as of January 2025

FIGURE 8: MUNICIPAL & PROVINCIAL SPREAD VS. GOC PERFORMANCE



Source: RBC Capital Markets; spread levels as of January 2025

FIGURE 9: MUNICIPAL & PROVINCIAL SPREAD VS. GOC PERFORMANCE



Source: RBC Capital Markets; spread levels as of January 2025

INDICATIVE NEW ISSUE PRICING LEVELS

	2025	2024				2023		
Spreads vs. GoC	**Current**	**End**	**High**	**Low**	**Average**	**High**	**Low**	**Average**
10-year								
AAA Ont Muni	72	73	87	71	80	95	77	85
AA Ont Muni	73	74	88	72	82	96	79	86
MFABC	67	68	82	66	75	88	73	80
Toronto	73	74	88	72	81	96	78	86
30-year								
AAA Ont Muni	112	112	126	108	119	132	117	124
AA Ont Muni	114	113	128	109	121	134	119	125
MFABC	109	108	120	104	114	127	112	118
Toronto	113	113	127	109	120	134	119	125

	2025	2024				2023		
Relativities	**Current**	**End**	**High**	**Low**	**Average**	**High**	**Low**	**Average**
10-year								
AAA Ont Muni	10	10	13	10	11	12	10	11
AA Ont Muni	11	11	14	11	13	13	11	12
MFABC	5	5	8	5	6	7	4	5
Toronto	11	11	14	11	12	12	11	12
30-year								
AAA Ont Muni	25	26	30	26	28	31	29	30
AA Ont Muni	27	27	32	27	30	34	30	32
MFABC	22	22	24	22	23	24	24	24
Toronto	26	27	31	27	29	33	30	31

As of January 20, 2025

7. MUNICIPAL & AGENCY SUSTAINABLE DEBT MARKET

Municipal & Agency ESG Bond Issuances

The Environmental, Social, and Governance ("ESG") market has shown strong growth in Canada and in Global markets since 2014. In Canada, we've seen continued interest from issuers to print ESG related offerings, fuelled by appetite from investors who have large ESG mandates and growing funds directed toward the ESG market. The Canadian market is expected to further advance to continue the momentum, particularly with the Government of Canada's commitment to issue another green bond under the most recently updated Framework before the end of the 2024-2025 Fiscal Year.

In the Canada Public Sector space, total Green, Social, Sustainability & Sustainability-Linked (GSSS) Bond supply reached ~C$16.5 billion1, of which C$10 billion was from Green Bonds, on par with the C$16 billion seen in 2023 and lower than the C$22.7 billion peak seen in 2022. Municipal and agency ESG issuances accounted for ~C$3.0 billion of the volume, almost double the C$1.8 billion seen last year. In 2024, near 50% of aggregate municipal and agency offerings were printed in ESG format, slightly higher than the 48% seen in 2023.[1]

Sustainability remained the most issued format for municipal and agency issuers, with 6 out of 9 labelled bond issuances this year printed as a sustainability bond. Ottawa issued their inaugural sustainability bond this year, following the City's development of their sustainable debenture framework in February 2024. Municipal Finance Authority of British Columbia's bonds have been identified as sustainability bonds by Bloomberg given the granular level of disclosure on use of proceeds prior to each transaction.

City of Toronto and TransLink brought in the C$500 million of Green Bond supply in 2024, while City of Toronto remained the sole issuer for Social Bond in the municipal and agency space, printing a C$200 million new 30-year line.

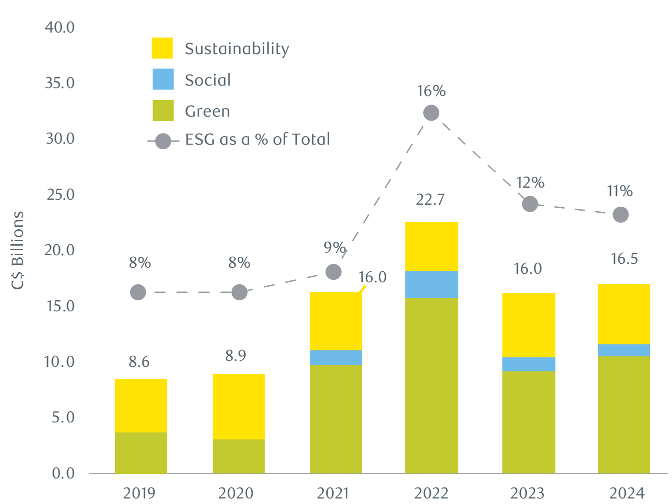
Municipal & Agency ESG Impact

Canadian municipalities and agencies have been applying a climate lens to capital projects and asset managements, as well as using comprehensive reporting to incorporate climate-related financial disclosures in their annual financial reports. Of note, City of Toronto publishes an annual ESG Performance report, although a lot of corporations have these ESG reports, Toronto is the only municipality in Canada to do so.

Some of the key areas for the use of proceeds for labelled bonds in the Canadian municipal and agency issuer space include:

- Transit: Initiatives include carbon budget, transition to cleaner energy for public transit, reducing burning fossil fuels, electronic train maintenance
- Housing: targets include increasing affordable housing supply, balancing rental market, increase senior housing and shelter service
- Community Infrastructure: recreational centres, addiction facilities, childcare centres, medical equipment

FIGURE 10: CANADIAN PUBLIC SECTOR GREEN, SOCIAL, SUSTAINABLE & SUSTAINABILITY-LINKED BOND MARKET



Source: RBC Capital Markets, Climate Bonds Initiative; as of February 2025

TRANSLINK

C$300,000,000

Green Bond
4.60% 14Jun55
AA/Aa2/-

Lead & Bookrunner
June 10, 2024

Use of Proceeds:
SkyTrain Operations & Maintenance, Active Transportation, Rail Expansion Program, SkyTrain Car Fleet Acquisition and Refurbishment, Zero Emissions Bus Fleet – Electric Buses

- The 2055 maturity marked the longest Canadian GSSS Bond from any public sector issuers, as well as TransLink's longest green maturity
- Represented TransLink's 4th unique green bond line and the 5th green bond issuance for the program. Total green bond issuance from TransLink is now C$1.5 billion
- The high quality orderbook saw strong participation from Pension (37.8%), Asset Manager (31.1%), Insurance (28.7%), Government/OI (2.0%) and Hedge Fund (0.5%)

TORONTO

C$200,000,000

Social Bond
4.55% 29Oct54
AA/Aa1/AA

Joint Lead Manager
October 9, 2024

Use of Proceeds:
Corporate Real Estate Management, Toronto Community Housing Corporation and Toronto Seniors Housing Corporation, Toronto Shelter and Support Services, and Transportation Services

- The offering was well received with the final orderbook ~2.4x oversubscribed across 27 accounts, marking the most oversubscribed Social Bond deal since the inaugural Social Bond in 2020
- The transaction was well supported by the sustainable investment community, with investors who are UN PRI signatories and/or have green mandates representing ~90% of overall sales
- The high quality orderbook had a broad investor base with participation from Asset Managers (54%), Insurance (28%), Pension Funds (10%), Central Bank/Government (6%) and Bank/Treasury (2%)

Ottawa

C$225,000,000

Sustainability Bond
3.75% 2Oct34
-/Aaa/AA+

Joint Lead Manager
September 24, 2024

Use of Proceeds:
Affordable Basic Infrastructure, Access to Essential Services, Social and Affordable Housing, Socioeconomic Advancement and Empowerment

- Represents Ottawa's inaugural Sustainability Bond as well as their return to the CAD GSSS market since May 2022
- City of Ottawa was the first Canadian municipality to issue a Green Bond in November 2017, and the second Canadian municipality to issue a Sustainability Bond
- The offering experienced strong reception from market participants with final orderbook ~1.7x oversubscribed across 29 accounts

8. SECONDARY TRADING VOLUMES

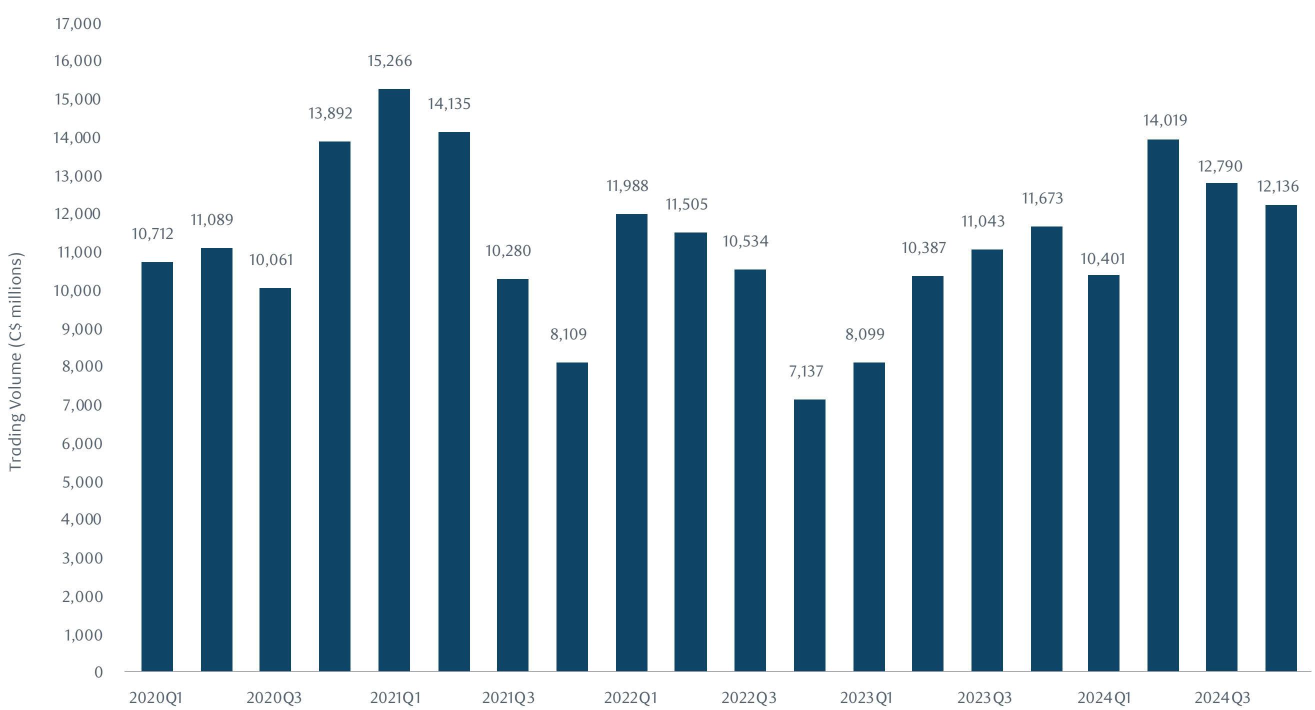
Municipal & agency sector trading volumes hit their highest level on record in 2024 at C$49.4 billion. Total trading increased by 19.7% versus the prior year's volumes of C$41.2 billion. This also marked the fifth straight year that volumes were in excess of C$40.0 billion. The broader sector has displayed a remarkable improvement over the last decade, with municipal & agency trading totalling just C$26.3 billion in 2014.

In 2024, Q2 marked the most active quarter on record, while Q1 was the lightest. The aligned with prior years which have generally seen trading be lighter in the beginning quarter before picking up alongside heightened supply. While Q1 marked the lightest quarter in 2024, it would have marked the most active quarter in a year as recently as 2019.

Municipal & agency sector secondary market activity has primarily been driven by two-way client activity, with investors adding additional product across the curve while trading in and out of different lines. Secondary activity has remained strong alongside active new issue volumes. Trading has primarily been focused in some of the more liquid names, and in particular the larger bullet maturities.

Given RBC's focus on the sector both domestically and internationally, we continue to see increased interest from U.S., European, and Asian accounts as investors find value in this sector and receive approval for investing in various credits. Trading activity typically picks up around the time of new issues with steady demand for secondary paper in times of reduced municipal & agency issuance. The chart below highlights the quarterly trading volumes in the municipal & agency sector based on established secondary trading data providers.

FIGURE 11: MUNICIPAL & AGENCY SECONDARY TRADING STATS



Source: Secondary Trading Market Data Provider

9. MUNICIPAL & AGENCY TREASURERS ROUNDTABLE

As a leading dealer in the Canadian Municipal Sector, RBC was pleased to hold our Municipal and Agency Roundtable in December 2024. The Roundtable provided an opportunity for Municipal and Agency issuers to explore and discuss topics relevant to the market. RBC also hosted its annual Municipal & Agencies Conference on March 6th, 2025. Below are some of the key takeaways from the roundtable event:

9.1. 2024 Municipal and Agency Roundtable (December 2024)

The Municipal and Agency Roundtable held in December 2024 featured participants from the City of Toronto, City of Ottawa, City of Montreal, City of Vancouver, Region of York, Region of Waterloo, Municipal Finance Authority of BC (MFABC) and TransLink. The discussions held at the roundtable were centred around the following topics: Challenges and opportunities, financial support from higher levels of Governments, borrowing program, investor highlights, ESG

Affordable Housing Remains the Most Pressing Challenge: The demand for affordable housing has been outpacing supply, largely driven by the immigration growth and placed pressure on the City's resources to deliver. This issue hit the hardest at the lowest income group, with a particularly large gap in housing supply for purpose built rental and community housing. Housing delivery continues to be a priority for all level of governments, there are various provincial and federal housing funds expected to be delivered in 2025 to meet housing starts targets and accelerate constructions. Meanwhile municipalities are actively planning housing projects and homeless remedy plan for 10-year or longer

Public Transit Revenue Not Fully Recovered: While transit ridership recovered near 80% of pre-pandemic levels at most regional governments, revenue shortfalls persisted due to slow returns to offices in downtown. The increasing adoption in zero-emission vehicles also posed a challenge as it decreased fuel-tax revenue, although it is beneficial for the society in the long term, it is not easy to replace the fuel-tax part of the revenue source. Municipalities have received temporary funding from provincial governments to cover for transit revenue shortage as well as implementing projects on expanding transit network. Overall ridership is expected to improve in 2025

Immigration Acted as A Double-Edged Swords: Immigration has been a key part of economic growth and culture diversity, however the rapid unplanned increase in population led to a significant growth in demand and adding pressure for the municipalities to provide sufficient access to public health, housing, and social services

Inflation Driven Cost Eased but Still Persist: While the rate of consumer price inflation has slowed in 2024, labour and supply-cost inflation still reside, fuelled challenges to both operating budgets and capital project costs, particularly for transit s and housing infrastructure. Municipalities have to be careful and innovative on fiscal management and strategically prioritize projects to maintain essential services. Some cities have pivot to increasing non-tax revenue such as advertisements and sponsorship

Borrowings Expected to Elevate in 2025: Municipal and agency issuers continue to offer investors attractive value relative to other government credits as local governments must balance their operating budgets. Total municipal and agency supply reached C$5.799 billion in 2024, making this year the 2nd most active on record with supply just below the record high of C$5.892 billion seen in 2021. Municipal and agency borrowings are effected by the scope, scale and timing of projects, as well as interest rates and investor sentiment. As capital growth spending accelerates and the increasing number of ESG projects, municipal and agency borrowers are expected to have a slightly larger funding program than 2024

Increasing Involvement in ESG: Total Green, Social and Sustainability bond offerings from municipal and agency issuers reached C$3.0 billion in 2024, up from the C$1.8 billion seen in 2023 and accounted for more than 40% of the aggregate municipal and agency debt offerings in 20241. Of note, Ottawa printed their inaugural sustainability bond this year which followed the City's development of their sustainable debenture framework. Many municipalities and agencies issue ESG bonds based off their sustainable bond framework, with majority of the UoP flowing into reducing carbon pollution, building affordable housing and raising community awareness

10. CANADIAN MUNICIPAL & AGENCY LEAGUE TABLES

10.1. Municipal & Agency Underwriting Market Share

RBC is a top dealer of municipal bonds and maintains a robust presence in the municipal market, as evidenced by its #1 ranking on the Bloomberg Municipal League Table (ex. Quebec) over the past 15+ years.

CANADIAN MUNICIPAL & AGENCY NEW ISSUE LEAGUE TABLE (2024)*

	Dealer	Total (C$MM)	Market Share (%)
1	**RBC Capital Markets**	**1,414.37**	**29.5%**
2	CIBC	1,343.30	28.0%
3	National Bank Financial Inc	1,091.08	22.7%
4	BMO Capital Markets	486.25	10.1%
5	TD Securities	462.00	9.6%
	Grand Total:	**4,797.00**	**100.0%**

*Excludes Quebec Municipalities

10.2 Recent Notable RBC-Led Transactions

Winnipeg
C$200,000,000
4.65% due June 2064
- / Aa2 / AA+
Joint Lead
January 2024

Montréal
C$400,000,000
4.40% due Dec 2043
A(H) / Aa2 / AA
Joint Lead
February 2024

Calgary
C$180,000,000
4.20% due June 2034
AA(H) / Aa1 / AA+
Joint Lead
March 2024

Municipal Finance Authority of BC
C$415,000,000
4.05% due Dec 2033
- / Aaa / AAA
Joint Bookrunner
April 2024

Halton Region
C$77,475,000
Serial Offering
due April 2025-2039
- / Aaa / AAA
Joint Lead
April 2024

London Canada
C$30,000,000
Serial Offering
due April 2025-2034
- / Aaa / -
Joint Lead
April 2024

Toronto
C$300,000,000
4.90% due May 2054
AA / Aa1 / AA
Lead
April 2024

Municipal Finance Authority of BC
C$695,000,000
2.55% due Oct 2029
- / Aaa / AAA
Joint Bookrunner
May 2024

Region of Waterloo
C$40,000,000
Serial Offering
due June 2025-2039
- / Aaa / -
Joint Lead
June 2024

FNFA
C$452,000,000
4.10% due June 2034
AA(L) / Aa3 / A+
Joint Lead
June 2024

Recent Notable RBC-Led Transactions Continued

TransLink
C$300,000,000
Green Bond
4.60% due June 2055
AA / Aa2 / -
Lead Bookrunner
June 2024

City of Saskatoon
C$48,400,000
Serial Offering
due July 2025-2034
- / - / AAA
Lead
June 2024

Niagara Region
C$39,800,000
Serial Offering
due July 2025-2044
- / - / AA+
Lead
July 2024

Toronto
C$300,000,000
4.25% due July 2034
AA / Aa1 / AA
Joint Lead
July 2024

Municipal Finance Authority of BC
C$190,000,000
3.75% due Dec 2034
- / Aaa / AAA
Joint Bookrunner
September 2024

Ottawa
C$225,000,000
Sustainable Bond
3.75% due Oct 2034
- / Aaa / AAA
Joint Bookrunner (B&D)
September 2024

York Region
C$100,000,000
4.05% due May 2034
- / Aaa / AAA
Lead
October 2024

Durham Region
C$56,516,000
Serial Offering
due Oct 2025-2044
- / Aaa / AAA
Joint Lead
October 2024

City of Vancouver
C$125,000,000
4.00% due Oct 2034
- / Aaa / AAA
Joint Lead
October 2024

Toronto
C$200,000,000
Social Bond
4.55% due Oct 2054
AA / Aa1 / AA
Joint Lead
October 2024

Halton Region
C$54,647,000
due October 2054
- / Aaa / AAA
Joint Lead
October 2024

Toronto
C$200,000,000
Green Bond
4.00% due Dec 2034
AA / Aa1 / AA+
Joint Lead
November 2024

Region of Waterloo
C$74,000,000
Serial Offering
due Dec 2024-2044
- / - / AAA
Joint Lead
November 2024

Regina
C$100,000,000
4.25% due Dec 2054
- / - / AAA
Sole Lead
December 2024

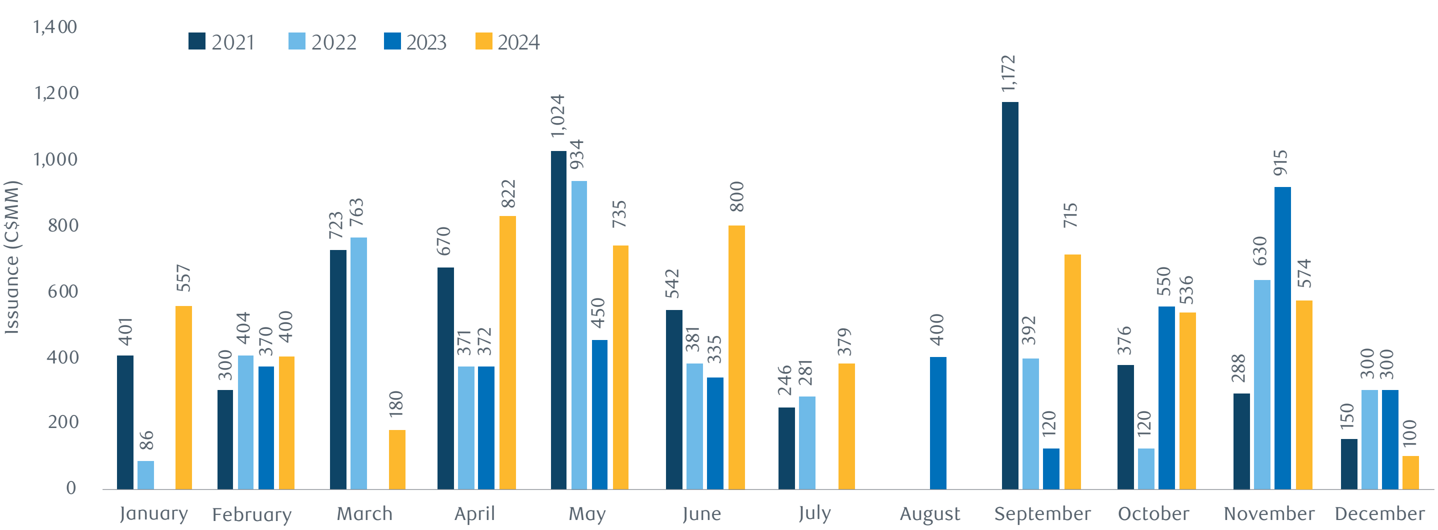
11. APPENDIX – ADDITIONAL MATERIAL

11.1. Seasonality and Issuance Trends

Municipal & agency new issue supply has historically been centred around the spring and fall issuance timeframes which encompass February-June and September-December respectively.

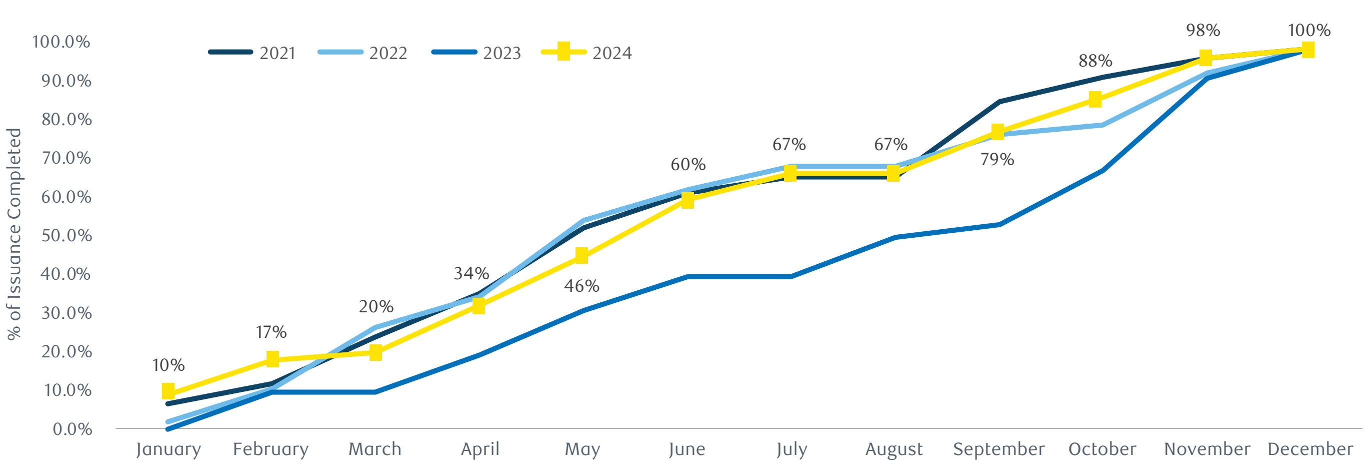
The issuance pattern in 2024 looked more similar to that of both 2021 and 2022, that the 'time delayed' pattern that we saw in 2023. The market was active throughout the year with issuance in each month except for August and had one of the strongest starts on record. Around 10% (C$557 million) of the year's total volume was completed in January, a high-water mark for the month of January in municipal & agency terms. This momentum carried through, with steady activity into April where 34% of activity had been completed. 67% of supply was completed by July, and 0there was no issuance in August, both similar to what was seen in 2021 and 2022. Issuers utilized the back half of the year well, with activity occurring right up to the Christmas holidays in December.

HISTORICAL MONTHLY ISSUANCE TRENDS



Source: RBC Capital Markets; excludes Quebec Municipal Auction issuance

FIGURE 12: HISTORICAL MONTHLY ISSUANCE TRENDS



11.2. Ratings Summary

Canadian municipalities & agencies are highly-rated government entities that have benefitted from superior credit quality, underpinned by a strong economic profile, diversification of revenue sources, relative wealth of their respective economies, high functioning and productive labour forces and balanced socioeconomic and demographic profiles. Given the healthy credit profiles, most issuing entities as seen below have received the equivalent of AA to AAA ratings from the respective rating agencies. The rating agencies have adopted strict methodologies to evaluate the municipalities & agencies and have measured them on both quantitative and qualitative factors. Some of the more notable ratings categories include economic structure, financial management, debt and liquidity, risk metrics and budgetary performance.

MUNICIPALITIES & AGENCIES RATINGS SUMMARY

#	Issuer	Province	DBRS	Outlook	Moody's	Outlook	S&P	Outlook	Fitch
1	ACFA	AB	AA	-	Aa2	Stable	-	-	AA
2	City of Calgary	AB	AA(H)	Stable	Aa1	Stable	AA+	Stable	-
3	City of Guelph	ON	-	-	-	-	AAA	Stable	-
4	City of Hamilton	ON	-	-	-	-	AAA	Stable	-
5	City of Kingston	ON	-	-	-	-	AA+	Stable	-
6	City of London	ON	-	-	Aaa	Stable	-	-	-
7	City of Montreal	PQ	AH	Stable	Aa2	Stable	AA	Stable	-
8	City of Ottawa	ON	-	-	Aaa	Stable	AA+	Stable	-
9	City of Peterborough	ON	-	-	-	-	AA+	Stable	-
10	City of Regina	SK	-	-	-	-	AAA	Negative	-
11	City of Saskatoon	SK	-	-	-	-	AAA	Stable	-
12	City of St. John's	NF	-	-	A1	Stable	AA-	Positive	-
13	City of Sudbury	ON	-	-	-	-	AA+	Stable	-
14	City of Toronto	ON	AA	Stable	Aa1	Stable	AA+	Stable	-
15	City of Vancouver	BC	-	-	Aaa	Stable	AAA	Stable	-
16	City of Winnipeg	MB	-	-	Aa2	Stable	AA+	Stable	-
17	County of Wellington	ON	-	-	-	-	AAA	Stable	-
18	First Nations Finance Authority	BC	AA(L)	Stable	Aaa	Stable	AA-	Stable	-
19	Municipal Finance Authority of BC	BC	-	-	Aaa	Stable	AAA	Stable	AAA
20	NBMFC	NB	AH	-	Aa2	Stable	-	-	-
21	Quebec City	PQ	-	-	Aa2	Stable	-	-	-
22	Region of Durham	ON	-	-	Aaa	Stable	AAA	Stable	-
23	Region of Halton	ON	-	-	Aaa	Stable	AAA	Stable	-
24	Region of Niagara	ON	-	-	-	-	AA+	Stable	-
25	Region of Peel	ON	-	-	Aaa	Stable	AAA	Stable	-
26	Region of Waterloo	ON	-	-	Aaa	Stable	-	-	-
27	Region of York	ON	-	-	Aaa	Stable	AAA	Stable	-
28	Translink	BC	AA	Stable	Aa2	Stable	-	-	-

Source: RBC Capital Markets, Bloomberg

From a financial management perspective, key factors include long-term fiscal sustainability, risk controls, tax competitiveness and revenue and expenditure management. Municipalities are also evaluated based on their reporting transparency and financial disclosure. With regards to debt management, focus remains on the municipality's debt burden and capital needs, liquidity management, internal cash flow generation, pension liabilities and access to capital markets.

Rating agencies evaluate the municipal sector based on a number of risk metrics. These metrics evaluate the issuer's revenue and expense management, capex plans, free cash flow generation, operating margin and debt loads.

RBC PUBLIC SECTOR MUNICIPAL & AGENCY CONTACTS

SENIOR FIXED INCOME COVERAGE

Jim Byrd
Managing Director
Global Head, Macro Products
416.842.5281
Toronto, Ontario
jim.byrd@rbccm.com

Dan Ram
Managing Director
Global Head, Flow Rates Trading
212.428-6333
Toronto, Ontario
daniel.ram@rbccm.com

MUNICIPAL & AGENCY SECTOR COVERAGE AND EXECUTION

Alex Caridia
Managing Director
Head, Global Public Sector Markets
416.842.7756
Toronto, Ontario
alex.caridia@rbccm.com

Jean-François Dubé
Managing Director
514.874.6928
Montreal, Quebec
jean-francois.dube@rbccm.com

Kevin Martin
Managing Director
416.842.7752
Toronto, Ontario
kevin.e.martin@rbccm.com

Mansoor Khan
Director
416.842.7765
Toronto, Ontario
mansoor.s.khan@rbccm.com

Chris Meston
Vice President
416.842.2548
Toronto, Ontario
christopher.meston@rbccm.com

Karen Théorêt
Vice President
514.878.7710
Montreal, Quebec
karen.theoret@rbccm.com

Claudia Chan
Associate
416.842.7750
Toronto, Ontario
claudia.chan@rbccm.com

Suzie Wang
Associate
416.842.6875
Toronto, Ontario
suzie.wang@rbccm.com

Alexandre Peterson
Associate
514.878.7395
Montreal, Quebec
alexandre.peterson@rbccm.com

PUBLIC SECTOR SECONDARY TRADING

Marty White
Provincial Trading
416.842.6300
Toronto, Ontario
marty.white@rbccm.com

Shreya Shah
Municipal & Agency Trading
416.842.6300
Toronto, Ontario
shreya.shah@rbccm.com

Aadesh Patel
Municipal & Agency Trading
416.842.6300
Toronto, Ontario
aadesh.patel@rbccm.com

Benoit Morin
Quebec Trading
514.878.7712
Montreal, Quebec
benoit.morin@rbccm.com