

RBC Debt Capital Markets

Canadian Public Sector Debt Market Update

December 2023

STRICTLY PRIVATE AND CONFIDENTIAL

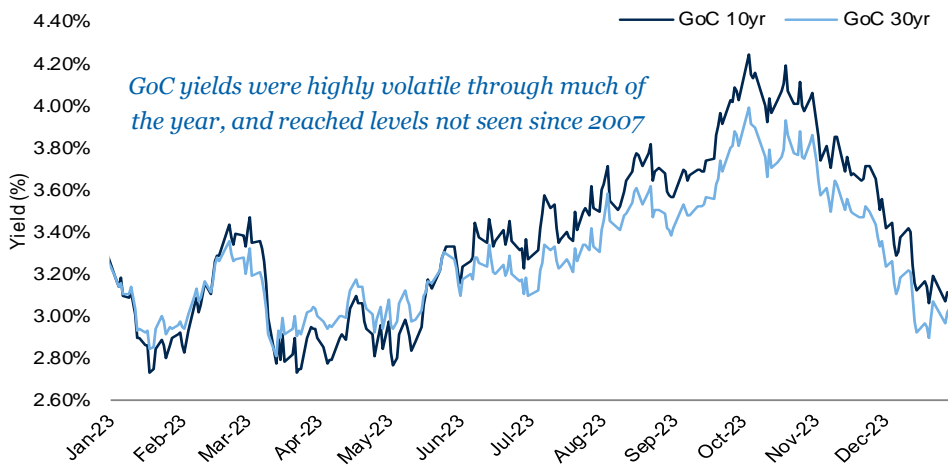


Capital
Markets

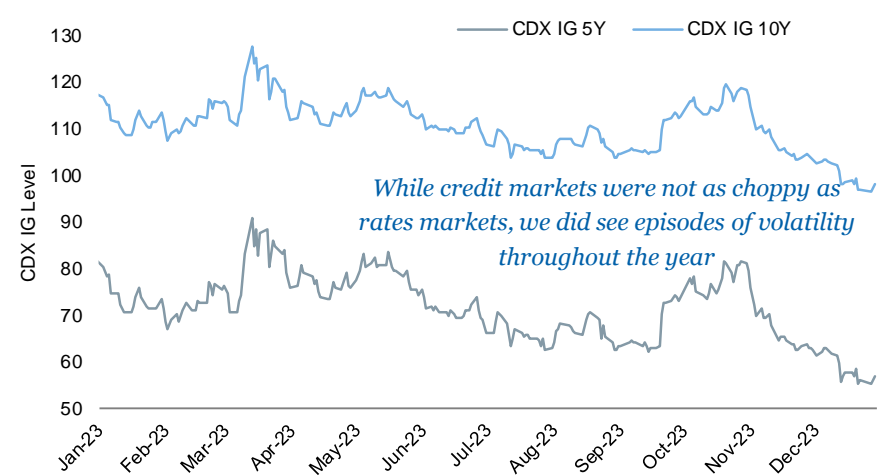
2023 Market Snapshot

- Hawkish central bank messaging around persistent inflation risks pushed yields out to their highest levels since 2007; later in Q4, investors were quick to price in future rate cuts as global central banks began to signal the end of the rate hiking cycle, causing yields to end the year below where they started
- While credit markets were not as choppy as rates markets, we did see episodes of volatility on concerns in the US regional banking sector in the spring and again in the fall as interest rates pushed towards, and then quickly retreated from, multi-year highs
- Equity markets were key beneficiaries of the positive change in sentiment in Q4, as the NASDAQ hit fresh all-time highs in late December and the S&P just narrowly missed its record high set at the end of 2021
- Energy prices generally drifted lower for much of the final quarter of the year, retracing from the highs reached in late September
- CAD performed into the end of the year with the Bank of Canada thought to be on a lower rate cut trajectory vs. the U.S. Fed in 2024

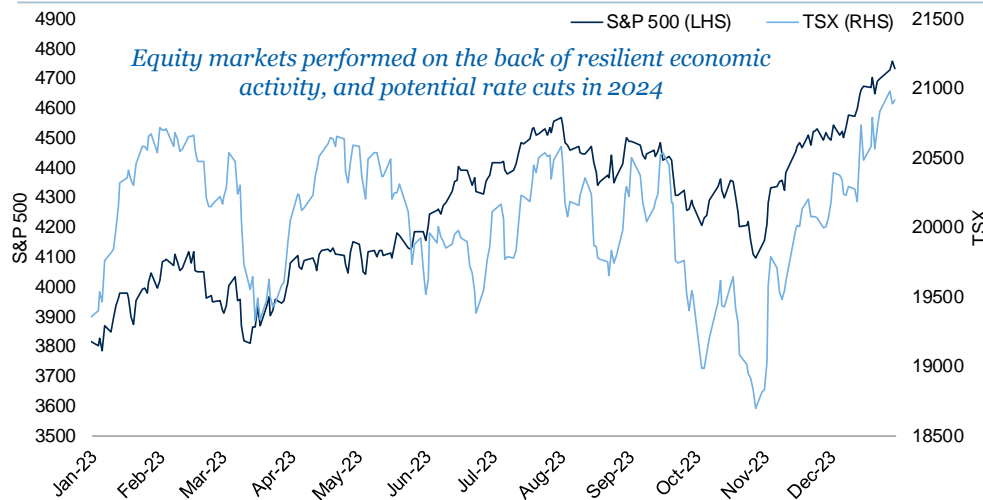
Rates



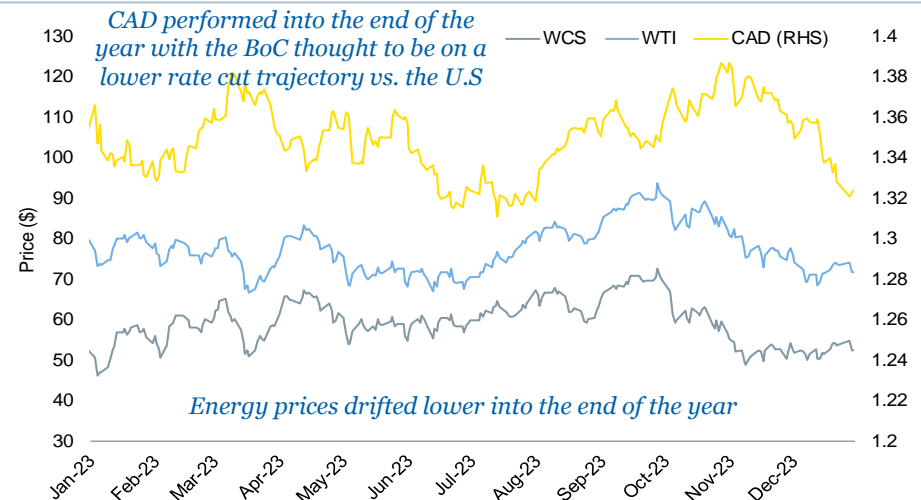
Credit Markets



Equity Markets



Commodities & Currency

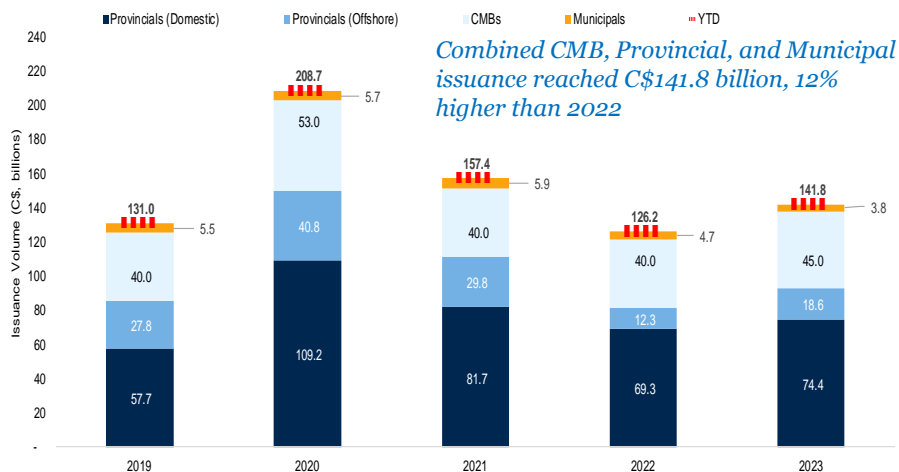


Combined Issuance Volumes

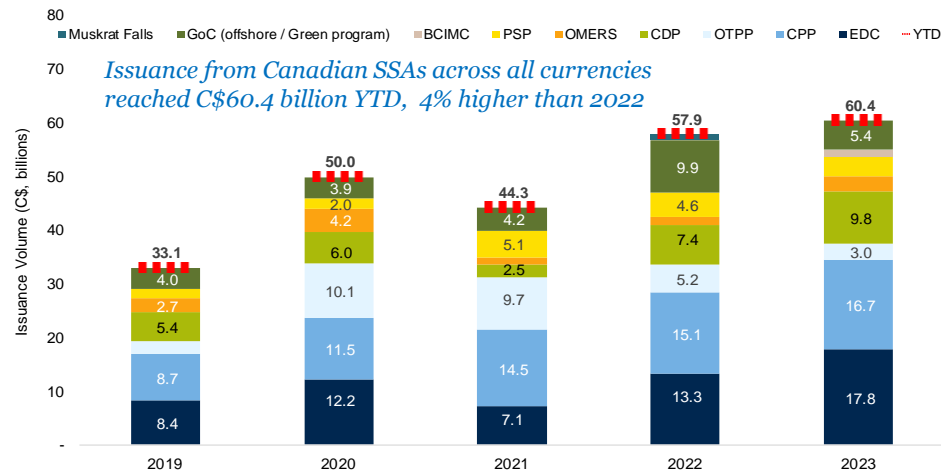
Aggregate Public Sector Issuance Highest Since 2020

- Issuance across all currencies and sectors reached C\$212.3 billion equiv. in 2023, up 12% from the C\$190.2 billion equiv. seen during 2022
- Canadian SSA volumes reached C\$60.4 billion equiv., 4% higher than the C\$57.9 billion equiv. seen in 2022 and marked the most active year on record
- CMB, Municipal, and Provincial issuance reached C\$141.8 billion, up 12% from the C\$126.2 billion seen in 2022
- Maple SSA reached their most active year on record at C\$10.1 billion, up 63% from the C\$6.2 billion seen in 2022

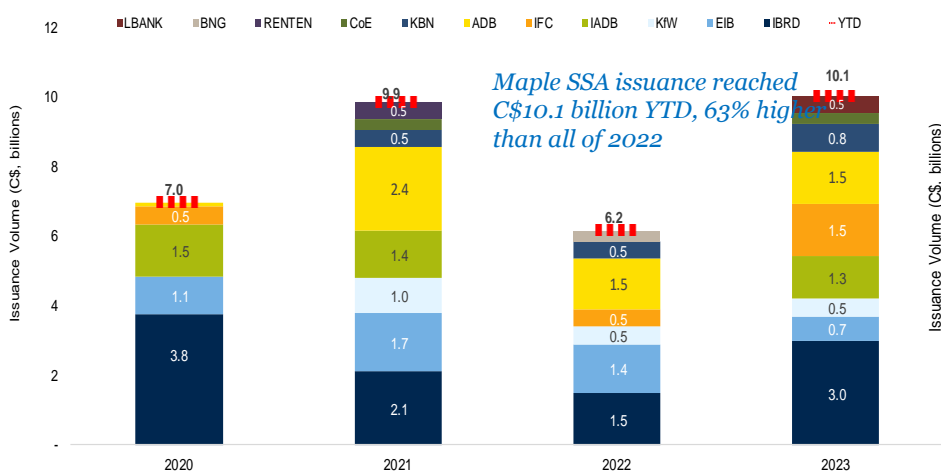
CMB, Municipal, and Provincial Total Issuance (All Currencies)



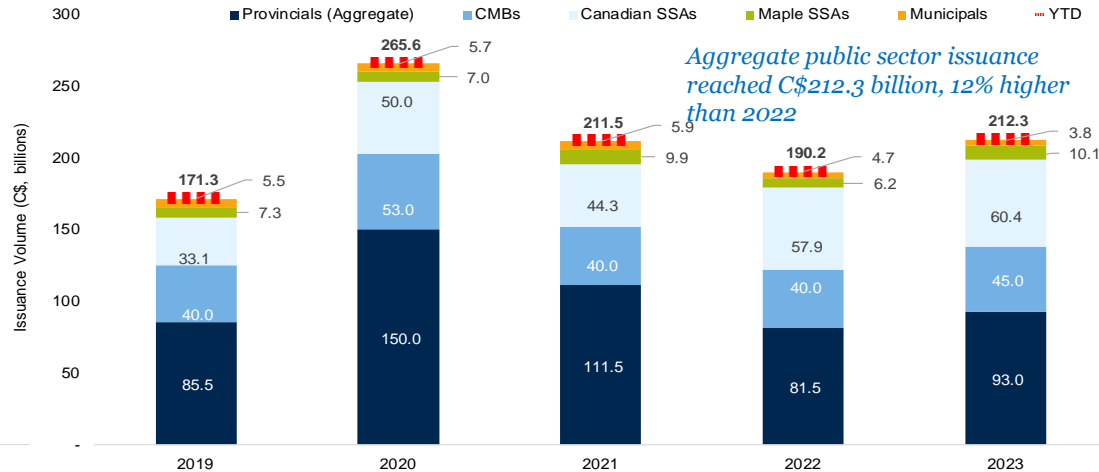
Canadian SSA Total Issuance (All Currencies)



Maple SSA Total Issuance (CAD)



Aggregate Public Sector Total Issuance (All Currencies)

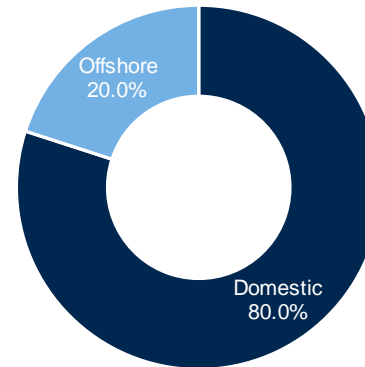


2023 Provincial Borrowing Overview

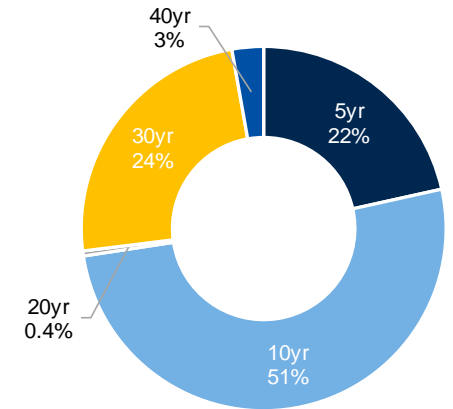
Provincial Borrowing Highlights of 2023

- **Issuance for the calendar year:** ~C\$93.0bn in total across offerings in CAD, USD, EUR, CHF, and AUD
- **Domestic vs Offshore:** 80.0% of issuance was domestic, amounting to C\$74.4bn vs. C\$18.6bn equiv. completed in offshore markets. This marked the second lowest level of offshore issuance since 2015, with 2022 marking the lowest level in a decade
- **Offshore Currencies issued:** A total of C\$18.6 billion, including US\$10.3 bn across 5 transactions, €2.9bn across 9 transactions, AUD 35 million across 1 transaction, and CHF 390 million across one transaction
- **Concentration:** Provincial issuance was highly concentrated in January, April, June, and November as issuers continued to navigate volatile markets as well as seasonal factors

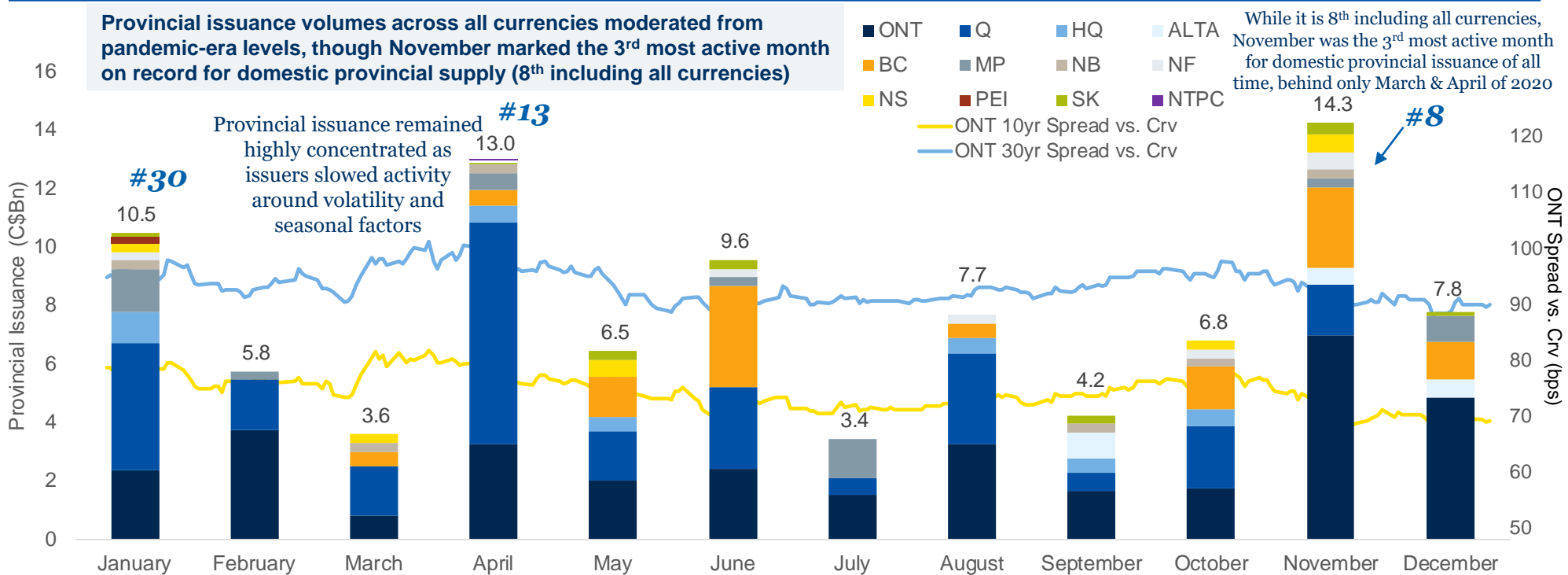
Domestic vs. Offshore



Issuance by Term (All Currencies)



Issuance Volume (All Currencies) by Month vs Spread moves to GoC



Canadian Public Sector Market Update

Market Update

Issuance Update

Offshore Borrowing

ESG, SSA & Maple Supply

Municipal Supply

Spreads & Ratings

Rates & Timing

Appendix

Domestic Public Sector Issuance (December 2023)

Ontario spreads tighter in December

Provincial credit spreads tighten 1.5bp in 10s and 0.5bps in longs

Domestic issuance of ~C\$14.1bn

45% higher than December 2022 issuance

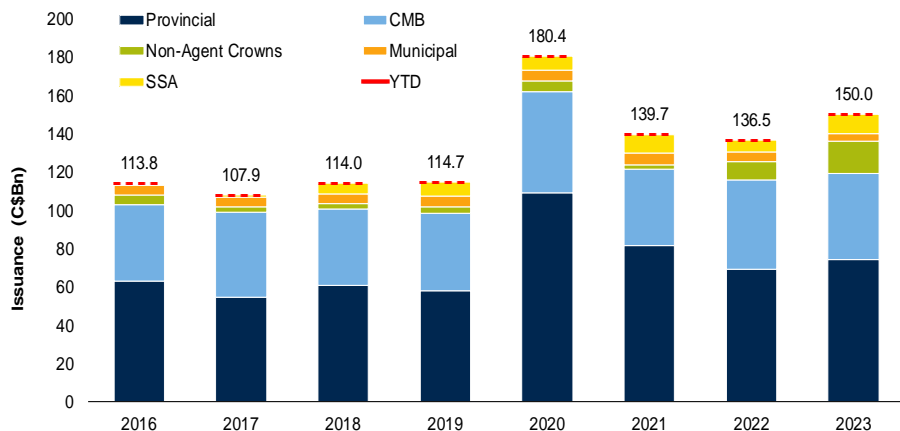
10-year term of preference YTD

10s account for ~47% of provincial supply in 2023

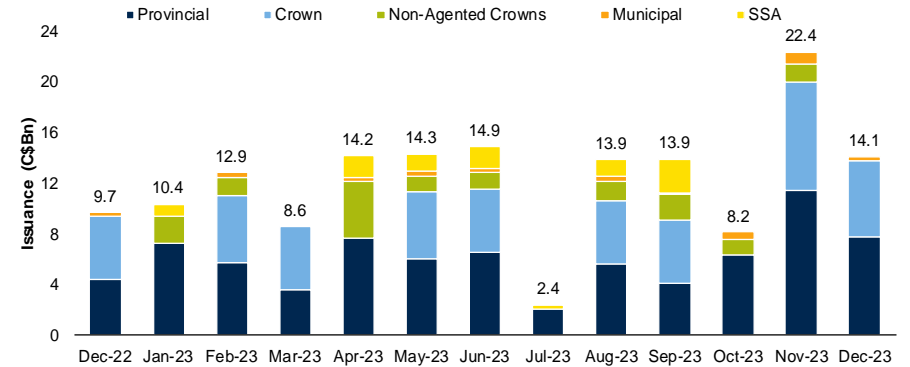
December adds C\$14.1 billion to bring 2023 total to C\$150 billion

- December saw 7 issuers completed C\$14.1 billion of domestic funding, marking the most active December since 2013 and the 2nd most active December on record (behind December 2013)
 - December 2023 supply was up 45% compared to December 2022
- Issuers remained active through the first half of the month as the backdrop remained supportive
- Canada Housing Trust printed a C\$6.0 billion 5-year offering with its final offering of 2023, bringing total borrowing on the year to C\$45.0 billion
 - CHT is set to issue up to C\$60.0 billion in 2024, with the Government of Canada to purchase up to C\$30.0 billion new issue CMB
- Provincial issuance totaled C\$7.8 billion across 11 offerings, marking the 2nd busiest month of 2023 for domestic provincial issue and 5th busiest in 2023 across all currencies
 - Notably, Ontario completed a C\$1.5 billion 8-year **Green Bond** re-opening
- The municipal market saw one new issue as TransLink issued a C\$300 million **Green Bond**, bringing municipal supply to C\$3.8 billion on the year, the lowest level since 2009
- Canadian SSAs were quiet, with sector supply ending at C\$60.4 billion (+4% vs. '22)
 - Excluding GoC issuance, sector supply was C\$55.0 billion, up +15% vs. '22
- Looking ahead, January has historically been an active month and we would anticipate that issuers will look to get off to a strong start in 2024

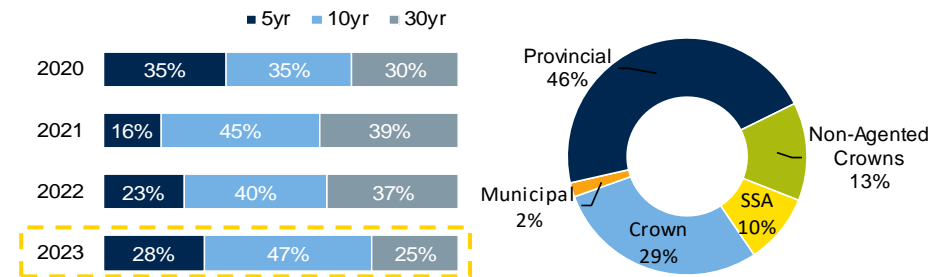
Public Sector New Issue Supply (Domestic Issuance)



Domestic Public Sector Issuance (Monthly)



Domestic Term Structure and Sector Supply (2023)



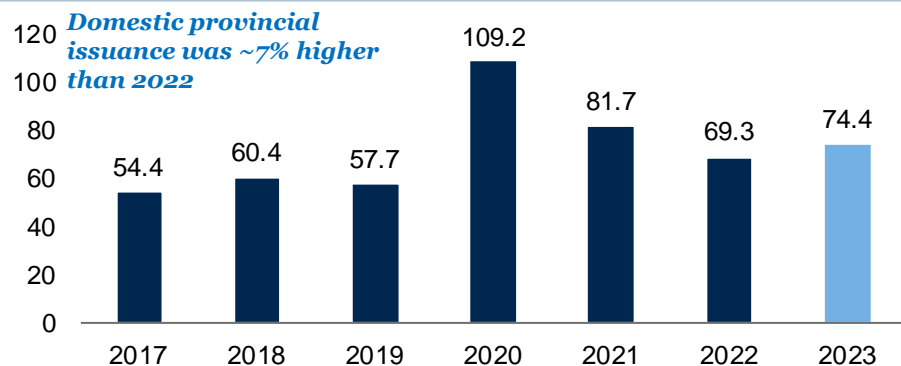
*ex CMB

Domestic Public Sector Issuance List (December 2023)

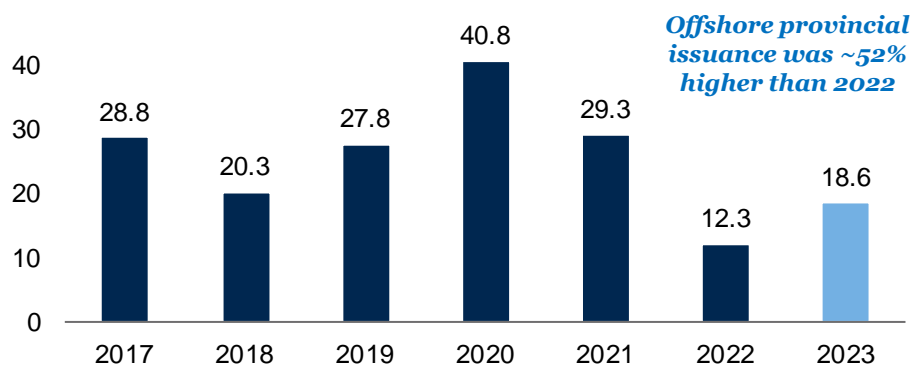
Trade Date	Issuer	Ratings (D/M/S)	Size (C\$m)	Term Bucket	Maturity	Spread	Coupon
1-Dec-23	Province of British Columbia	AA (High)/Aaa/AA	800	30	18-Dec-53	GoC+94.5	4.25%
4-Dec-23	Province of Ontario	AA (Low)/Aa3/A+	1,500	8	2-Feb-32	GoC+58.0	4.05%
4-Dec-23	TransLink	AA/Aa2/-	300	30	12-Dec-53	GoC+121.5	4.15%
4-Dec-23	Province of Saskatchewan	AA (Low)/Aa1/AA	125	40	2-Jun-62	GoC+93.0	3.80%
7-Dec-23	Province of Manitoba	A (High)/Aa2/A+	400	30	5-Sep-53	GoC+108.5	3.80%
7-Dec-23	Province of Ontario	AA (Low)/Aa3/A+	750	10	2-Jun-33	GoC+68.5	3.65%
7-Dec-23	Province of British Columbia	AA (High)/Aaa/AA	500	10	18-Jun-33	GoC+68.5	3.55%
11-Dec-23	Province of Alberta	AA/Aa2/A+	600	10	1-Jun-33	GoC+68.5	4.15%
12-Dec-23	Province of Ontario	AA (Low)/Aa3/A+	750	30	2-Dec-54	GoC+91.0	4.15%
12-Dec-23	Province of Manitoba	A (High)/Aa2/A+	500	5	1-Jun-29	GoC+47.5	2.75%
14-Dec-23	Canada Housing Trust	AAA/Aaa/AAA	6,000	5	15-Dec-28	GoC+22.0	4.25%
14-Dec-23	Province of Ontario	AA (Low)/Aa3/A+	1,250	10	2-Jun-33	GoC+65.5	3.65%
15-Dec-23	Province of Ontario	AA (Low)/Aa3/A+	600	30	2-Dec-54	GoC+88.5	4.15%
Total:			14,075				

Provincial Borrowing Update

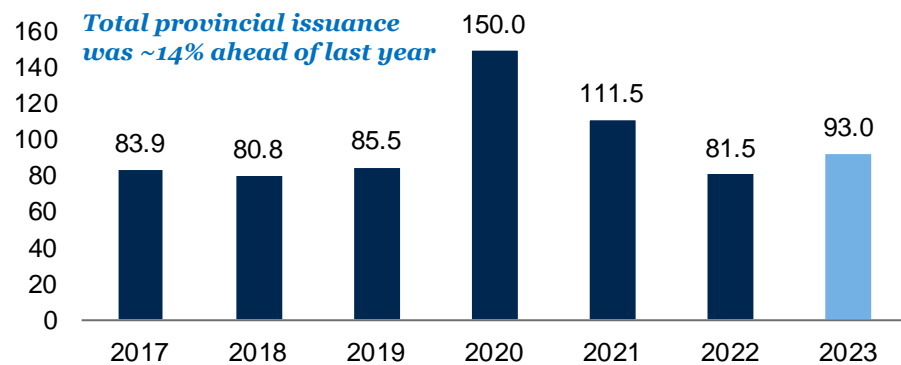
Provincial Domestic Issuance (January - December)



Provincial Offshore Issuance (January - December)



Total Provincial Issuance (January - December)

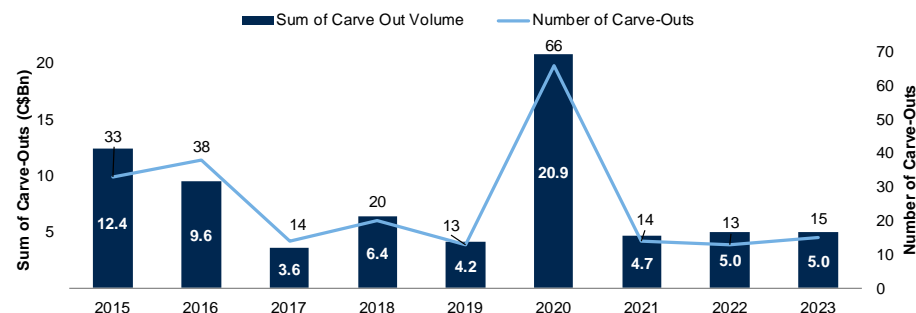


Provincial Carve-Out Update

- There were four carve-outs in December 2023 for C\$600 million, continuing the strong activity from November
 - December 1 – British Columbia C\$800 million 30-year, C\$300 million carve-out
 - December 7 – Manitoba C\$400 million 30-year, C\$100 million carve-out
 - December 12 – Manitoba C\$500 million 5-year, 2x C\$100 million carve-out
- In total, there were 15 carve outs for C\$4.95 billion during 2023, in line with the level seen in 2022
 - The most active month for carve-outs in 2023 was November which saw C\$2.9 billion across 4 trades
 - There was more issuer diversification this year with Saskatchewan and CPPIB joining Ontario, BC, Manitoba and Newfoundland & Labrador

	2023		2022		2021	
	(C\$MM)	# Carve Outs	(C\$MM)	# Carve Outs	(C\$MM)	# Carve Outs
Ontario	3,350	6	4,300	10	3,200	7
Quebec	-	-	-	-	-	-
Alberta	-	-	-	-	400	2
British Columbia	300	1	300	1	300	1
Manitoba	500	4	150	1	400	1
Newfoundland & Lab	300	1	200	1	150	1
New Brunswick	-	-	-	-	-	-
Saskatchewan	100	1	-	-	200	2
Hydro Quebec	-	-	-	-	-	-
CPPIB	400	2	-	-	-	-
MFABC	-	-	-	-	-	-
Grand Total	4,950	15	4,950	13	4,650	14

Historical Number of Carve-Outs and Sum of Volumes

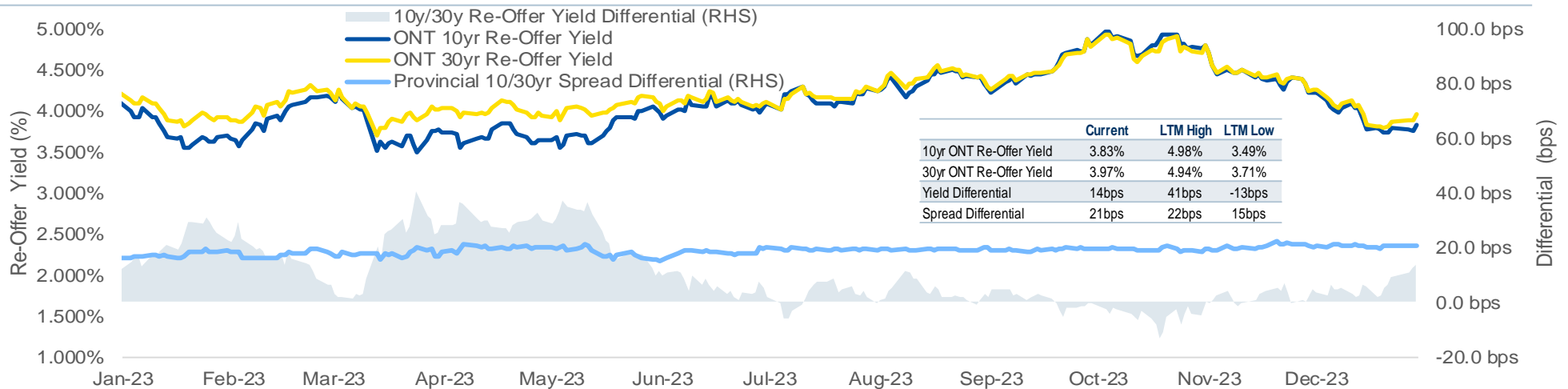


CMB & Provincial Re-Offer Yields

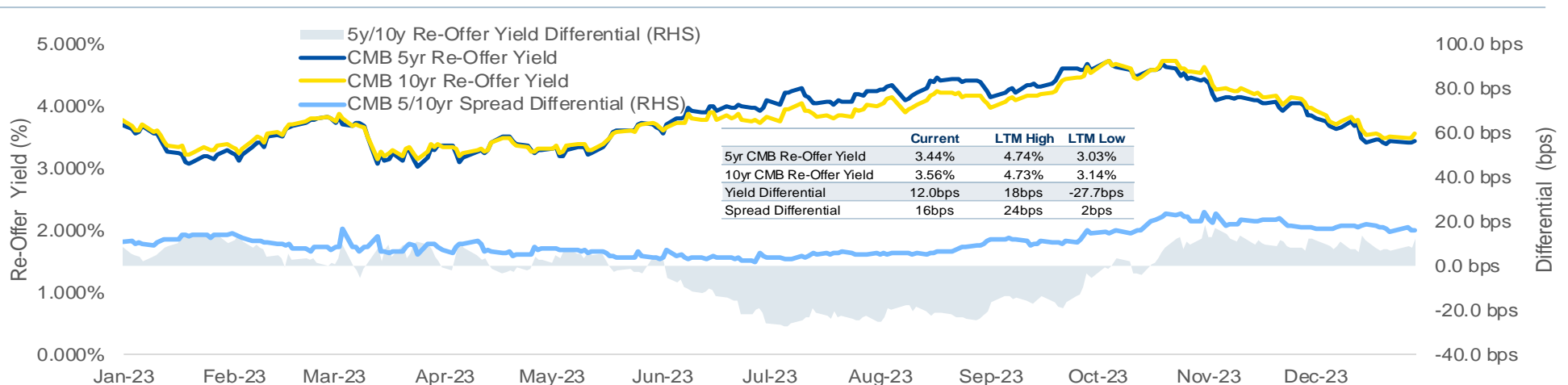
Provincial Curve Steepened & CMB Curve Remained Flat

- Although the provincial 10s/30s credit box were relatively stable through the month, provincial yield curve steepened on the back of the significant steepening movement in the underlying GoC yield curve, with the 10s/30s yield ending the month 14bps apart vs. 3bps at the beginning of month
 - Rates rallied on central banks' clearer signal for potential cuts in 2024, GoC yields declined 29 to 39bps across the curve in December with the 10-year sector outperforming longs
- While the provincial curve steepened, the CMB yield curve remained flat through December as the underlying 5s/10s GoC yields shifted at the same pace, both lowered by ~39bps. CMB 5s/10s box was also little changed through the month

Provincial Re-Offer Yields



CMB Re-Offer Yields

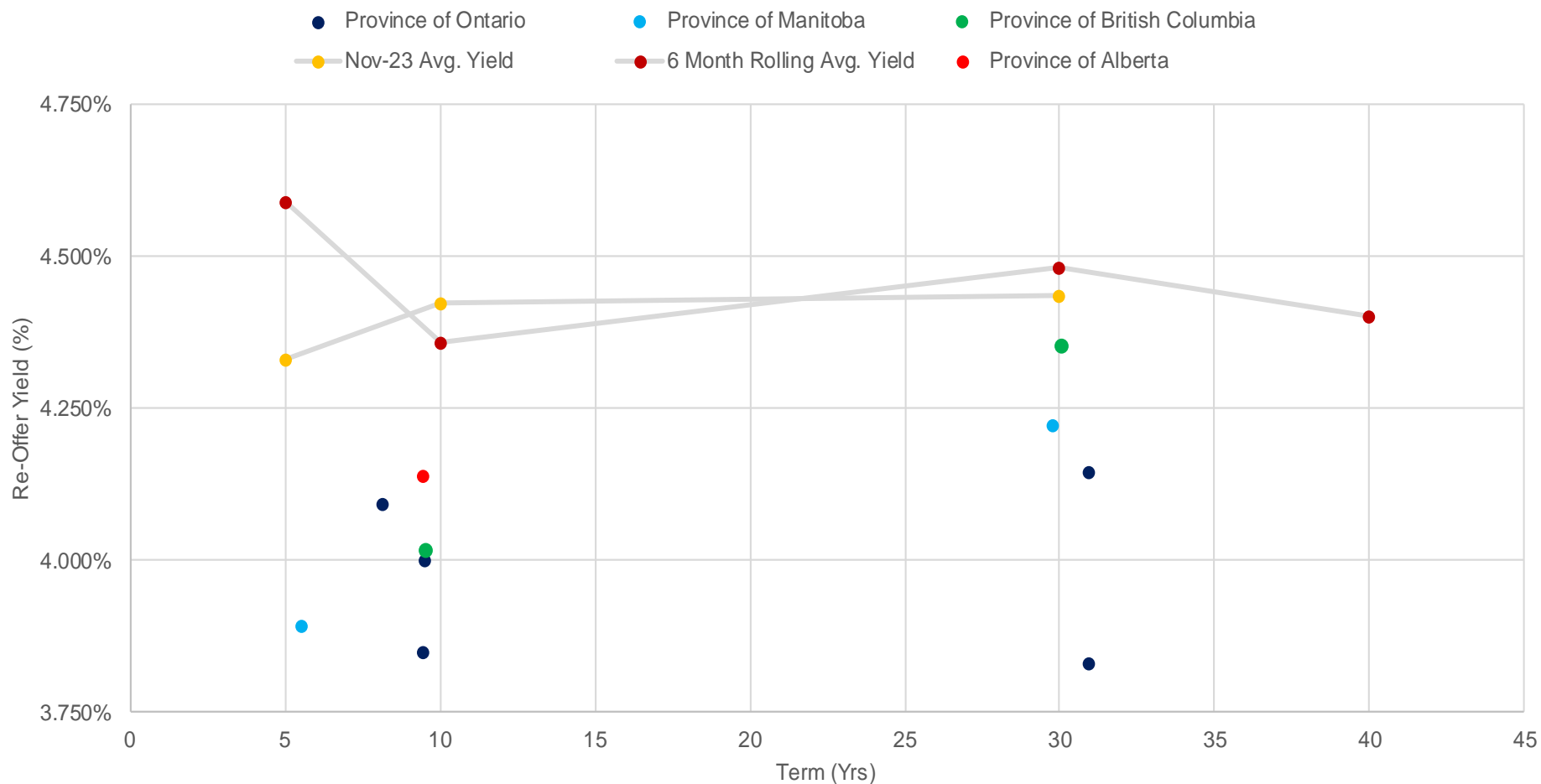


Provincial Issuance Re-Offer Yield Dot-Plot

Re-Offer Yields Shifted Lower in December

- Provincial funding costs shifted lower in December as underlying Canada yields declined and credit spreads tightened
- On a month-over-month basis we saw the average funding rate in the 10-year part of the curve decline 40bps compared to November offerings and 30-year funding rates declined 30bps vs November
- Versus the 6-month rolling basis, average 10-year yields were ~34bps lower than the 6-month rolling average while average 30-year yields were also ~34bps lower than the 6-month average
- The differentials on a month-to-month basis are influenced by the timing of transactions in this highly volatile rate environment

Provincial Issuance Re-Offer Yield Dot-Plot (December 2023)

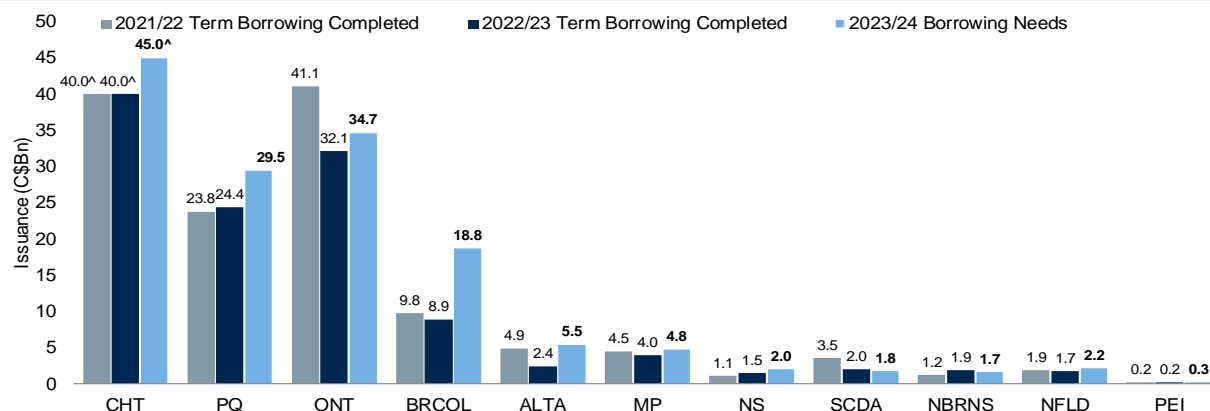


Domestic Public Sector Issuance (New Borrowing Needs)

Borrowing Needs Elevated in 2023/24

- Provincial borrowing is expected to total C\$92.9 billion in the government fiscal year 2023/24, up from the C\$79.1 billion that was completed in the 2022/23 government fiscal year
- To date, ~C\$74.4 billion of the 2023/24 provincial borrowing requirements (~80.1%) have been completed and ~C\$18.4 billion in borrowing needs remains
- Canada Housing Trust completed C\$45 billion across 8 offerings in 2023 and is expected to issue up to C\$60 billion in 2024
- Borrowing requirements for the Canadian Pension Asset Managers and Pension Funds sector (Provincial & Federal) currently stands at C\$35.3 billion for 2023 FY, up ~7% from the C\$33.1 billion completed in 2022 FY

Public Sector Borrowing Requirements vs. 2022/23 & 2023/24 Term Borrowing Completed



Public Sector Borrowing Requirements^{1, #}

Issuer	2022 (GY22/23) Program C\$B	2022 (GY22/23) Completed C\$B	New Stated Program 2023/24 (C\$B)†	% Change	Change (\$B)	Completed Borrowing (C\$B)	Completed Borrowing (%)	Remaining Borrowing (C\$B)
Ontario	32.2	32.1	34.7	+7.8%	+2.5	26.6	76.6%	8.1
Québec	25.9	24.4	21.9	(-15.4%)	(-4.0)	20.7	94.5%	1.2
British Columbia	8.9	8.9	17.5	+96.7%	+8.6	16.1*	92.2%	1.4*
Manitoba	3.9	4.0	5.2	+33.5%	+1.3	3.3	63.7%	1.9
Alberta	2.4	2.4	5.5	+125.9%	+3.0	2.1	37.6%	3.4
Saskatchewan	1.9	2.0	2.0	+5.0%	+0.1	1.5	78.0%	0.4
Newfoundland	1.8	1.7	2.2	+22.2%	+0.4	1.4	64.7%	0.8
Nova Scotia	1.7	1.5	2.0	+23.0%	+0.4	1.5	74.0%	0.5
New Brunswick	1.3	1.9	1.7	+34.3%	+0.4	1.2	70.8%	0.5
Prince Edward Island	0.3	0.2	0.3	-	-	-	-	0.3
Provincial Total:	80.1	79.1	92.9†	15.9%	Net: +12.8	74.4	80.1%	18.4
CPPIB	15.2	15.1	15.0	(-1.3%)	(-0.2)	16.7	111.3%	0.0
CADEPO	7.4	7.4	9.0	+21.2%	+1.6	9.8	109.3%	0.0
Ontario Teachers	5.2	5.2	3.0	(-42.8%)	(-2.2)	3.0	100.3%	0.0
PSP	4.6	4.0	5.0	+9.6%	+0.4	3.7	74.6%	1.3
OMERS	1.4	1.4	2.0	+44.0%	+0.6	2.7	135.8%	0.0
BCIMCO	-	-	1.3	-	+2.0	1.3	100.0%	0.0
Total:	33.8	33.1	35.3	4.2%	Net: +2.2	37.2	105.6%	1.3
Canada Housing Trust	40.0	40.0	45.0	+12.5%	+5.0	45.0	100.0%	0.0

1. Completed borrowing amounts are based on transaction settlement dates

*RBC estimate, †Program amounts net of pre-borrowing, ^CHT's reporting period runs on a calendar year basis (2022/23 refers to 2022, 2023/24 refers to 2023), #Deltas are 2022/23 Stated Program vs. 2023/24 Stated Program

*Newfoundland's borrowing requirements do not include funding for Newfoundland Hydro, and New Brunswick's borrowing requirements do not include funding for New Brunswick Municipal Finance Corporation

*British Columbia's borrowing requirements include short and long-term borrowing. Completed borrowing has been amended to reflect the C\$2.6 billion in remaining long-term borrowing for the Province

Canada Mortgage Bonds Update

CHT Completes Final Offering of 2023 in December

- On December 14, 2023 Canada Housing Trust priced a C\$6.0 billion re-opening of its 5-year 4.25% fixed rate offering maturing December 15, 2028
 - The transaction marked CHT's 8th and final offering of 2023 and brought total program borrowing to C\$45.0 billion
 - The transaction saw broad distribution with 98 investors participating on a final book size in excess of C\$7.5 billion
- CHT is expected to print C\$60.0 billion in 2024 with the Government of Canada set to purchase up to C\$30.0 billion of new issue CMB. This will mark the largest CMB issuance program on record
- CMB flows were volatile yet constructive following the FES release mid-November. Overall, the market took the information released by the Department of Finance as a positive catalyst for CMB spreads

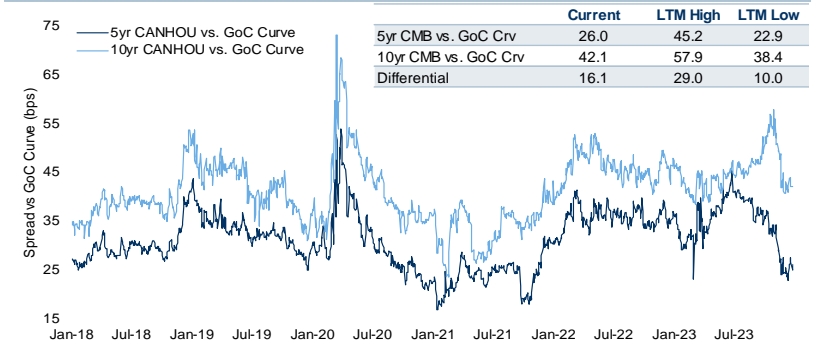
Recent CMB Offerings

Trade Date	Bond Description	Term	Size	Benchmark Spread
14-Dec-23	CANHOU 4.25% 15Dec28	5yr	C\$6.0bn	CAN 3.25% 1Sep28 +22bps
15-Nov-23	CANHOU 4.25% 15Mar34	10yr	C\$8.0bn	CAN 3.25% 1Dec33 +53bps
15-Nov-23	CANHOU FRN 15Mar29	5yr	C\$500mm	CORRA +26.5bps
23-Sep-23	CANHOU 4.25% 15Dec28	5yr	C\$5.0bn	CAN 3.25% 1Sep28 +28bps
16-Aug-23	CANHOU 4.15% 15Jun33	10yr	C\$4.0bn	CAN 2.75% 1Jun33 +43.5bps
16-Aug-23	CANHOU FRN 15Sep28	5yr	C\$1.0bn	CORRA +18.9bps
14-Jun-23	CANHOU 3.95% 15Jun28	5yr	C\$5.0bn	CAN 3.5% 1Mar28 + 25.5bps
17-May-23	CANHOU FRN 15Sep28	5yr	C\$1.25bn	CORRA +25.0bps
17-May-23	CANHOU 3.650% 15Jun33	10yr	C\$4.0bn	CAN 2.50% 1Dec32 +43.5bps
15-Mar-23	CANHOU 3.10% 15Jun28	5yr	C\$5.0bn	CAN 2.75% 1Sep27 +29.0bps
15-Feb-23	CANHOU 3.65% 15Jun33	10yr	C\$4.0bn	CAN 2.5% 1Dec32 +45.5bps

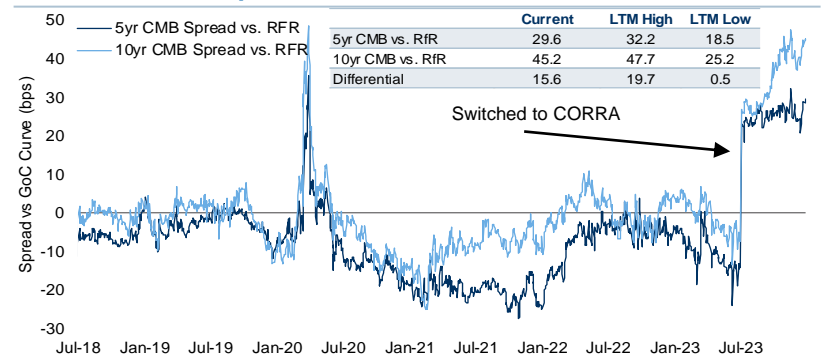
CMB Issuance Calendar (2023)

Term	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
5yr Fxd			C\$5.0bn			C\$5.0bn			C\$5.0bn			C\$6.0bn
5yr FRN		C\$1.25bn			C\$1.25bn			C\$1.0bn			C\$500mm	
10yr Fxd		C\$4.0bn			C\$4.0bn			C\$4.0bn			C\$8.0bn	

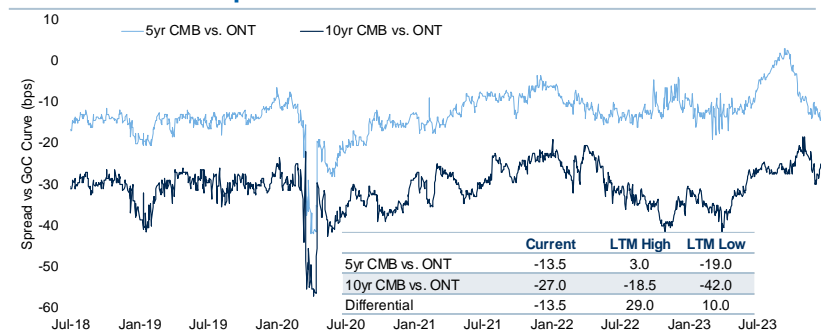
Historical CMB Spread vs. GoC



Historical CMB Spread vs. BA



Historical CMB Spread vs. ONT

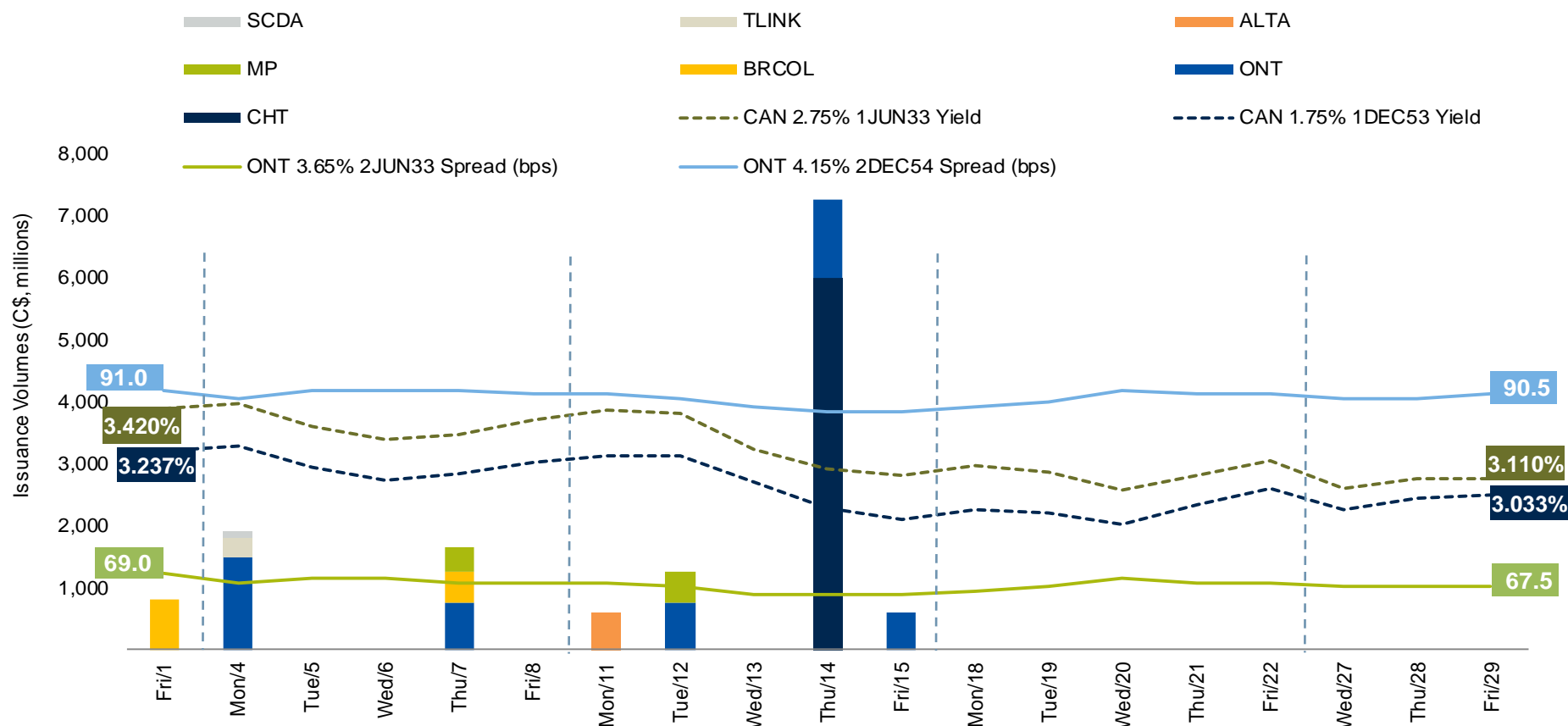


Domestic Issuance Trends

Provincial Spreads Tighten in December

- Provincial credit spreads tightened 1.5bps in 10-years and 0.5bps in longs as market tone remained constructive through the month
- Issuance during the month was largely concentrated in the front-half as issuers looked to avoid the traditional holiday slowdown
- In total, December saw 7 issuers access the market for ~C\$14.1 billion, up 45% from the C\$9.7 billion seen in December 2022
 - The Province of Ontario was the most active issuer with 5 deals priced during December for a total of C\$4.85 billion, while CHT completed the largest offering with a C\$6.0 billion 5-year offering

Issuance Volumes and Spread Performance



Canadian Public Sector Market Update

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Issuance Update

Offshore Borrowing

ESG, SSA & Maple Supply

Municipal Supply

Spreads & Ratings

Rates & Timing

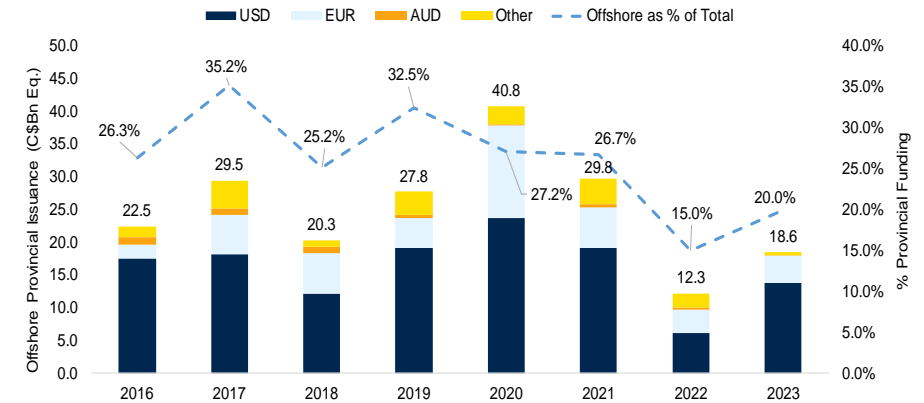
Appendix

Provincial Offshore Issuance Update

Provincial Offshore Market Quiet in December

- There were no new offshore provincial issues during December
- Offshore provincial supply ended 2023 at C\$18.6 billion equiv., accounting for 20.0% of provincial funding during the year
 - Offshore funding has historically averaged 20-30% of overall provincial funding
 - Offshore funding from the Provinces was up 51% year-over-year from the C\$12.3 billion equiv. in 2022 which had marked the lightest level since 2013
- We expect Canadian public sector issuers will continue to monitor international markets for potential funding opportunities

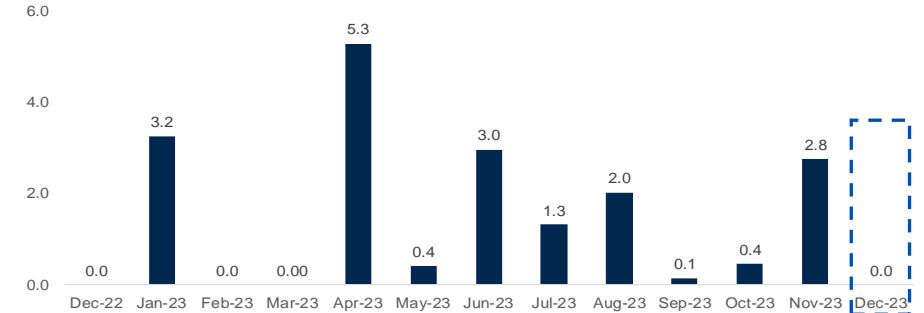
Provincial Offshore Funding Activity (C\$ Equiv.)⁽¹⁾



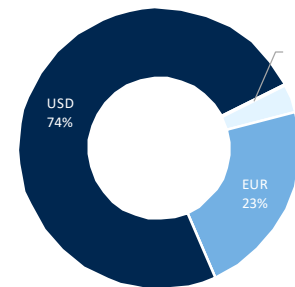
Recent Provincial Offshore Transactions

Trade Date	Issuer	Ratings (D/M/S)	Deal Size	Currency	Term	Maturity	Issue Spread (bps)
7-Nov-23	Province of British Columbia	AA (High)/Aaa/AA-	2,000	USD	5.0	15-Nov-28	SOFR MS+55
12-Oct-23	Province of British Columbia	AA (High)/Aaa/AA	50	EUR	26.0	18-Oct-49	-
11-Oct-23	Province of British Columbia	AA (High)/Aaa/AA	100	EUR	15.5	1-Apr-39	EUR MS +41
11-Oct-23	Province of British Columbia	AA (High)/Aaa/AA	59	EUR	26.0	18-Oct-49	-
11-Oct-23	Province of British Columbia	AA (High)/Aaa/AA	100	EUR	26.0	18-Oct-49	-
28-Sep-23	Province of Alberta	AA/Aa2/A+	100	EUR	15.5	18-Mar-39	EUR MS+39.8
31-Aug-23	Province of Quebec	AA (Low)/Aa2/AA-	1,500	USD	10.0	8-Sep-33	MS+72
20-Jul-23	Province of Manitoba	A (High)/Aa2/A+	1,000	USD	10.0	7-Jul-33	MS+74
27-Jun-23	Province of British Columbia	AA(H)/Aaa/AA	2,250	USD	10.0	6-Jul-33	MS+70
25-May-23	Province of British Columbia	AA(H)/Aaa/AA	90	EUR	26.0	18-Oct-49	-
25-May-23	Province of British Columbia	AA(H)/Aaa/AA	80	EUR	30.0	5-Jun-53	-
24-May-23	Province of British Columbia	AA(H)/Aaa/AA	86	EUR	16.0	7-Jun-39	MS+42.3
10-May-23	Province of Ontario	AA(Low)/Aa3/A+	35	AUD	11.0	3-Oct-34	MS+73.05
18-Apr-23	Province of Quebec	AA (Low)/Aa2/AA-	390	CHF	10.0	9-May-33	SARON MS+6
5-Apr-23	Province of Quebec	AA (Low)/Aa2/AA-	3,500	USD	5.0	13-Apr-28	MS+56
17-Jan-23	Province of Quebec	AA (Low)/Aa2/AA-	2,250	EUR	10.0	24-Jan-33	MS+41
15-Nov-22	Province of Manitoba	A (High)/Aa2/A+	35	EUR	14.5	7-Jun-37	-
11-Aug-22	Province of Manitoba	A (High)/Aa2/A+	112	EUR	18.0	25-Jun-40	-
28-Jun-22	Province of Manitoba	A (High)/Aa2/A+	50	EUR	15.0	6-Jul-27	-
1-Jun-22	Province of Saskatchewan	AA(low)/Aa1/AA	1,000	USD	5.0	8-Jun-27	MS+55
25-May-22	Province of British Columbia	AA (High)/Aaa/AA+	100	EUR	17.0	9-Jun-39	-
17-May-22	Province of Ontario	AA (Low)/Aa3/A+	500	GBP	4.0	26-May-26	UKT+85
12-May-22	Province of Ontario	AA (Low)/Aa3/A+	2,250	USD	5.0	19-May-27	UST+30.4
28-Apr-22	Province of Quebec	-/Aa2/AA-	750	GBP	5.0	15-Sep-26	UKT+74
30-Mar-22	Province of Quebec	-/Aa2/AA-	60	AUD	11.0	6-Apr-33	ACGB +86.4
14-Feb-22	Province of Saskatchewan	AA(low)/Aa1/AA	100	CHF	10.0	1-Mar-32	MS flat

Offshore Provincial Issuance Activity (C\$ Equiv.)



Offshore Provincial Currency and Term Breakdown (2023) (C\$ Equiv.)



Currency	3yr	5yr	7yr	10yr	15-25yr	30yr
AUD	-	-	-	0.0	-	-
CHF	-	-	-	0.6	-	-
EUR	-	-	-	3.2	0.4	0.5
GBP	-	-	-	-	-	-
USD	-	7.5	-	6.3	-	-
NZD	-	-	-	0.0	-	-
Total:	-	7.5	-	10.2	0.4	0.5

There were no new offshore offerings from the provinces in December

11 Source: RBC Capital Markets

(1) Issuance levels as at December 29, 2023

Public Sector Sustainable Debt Market

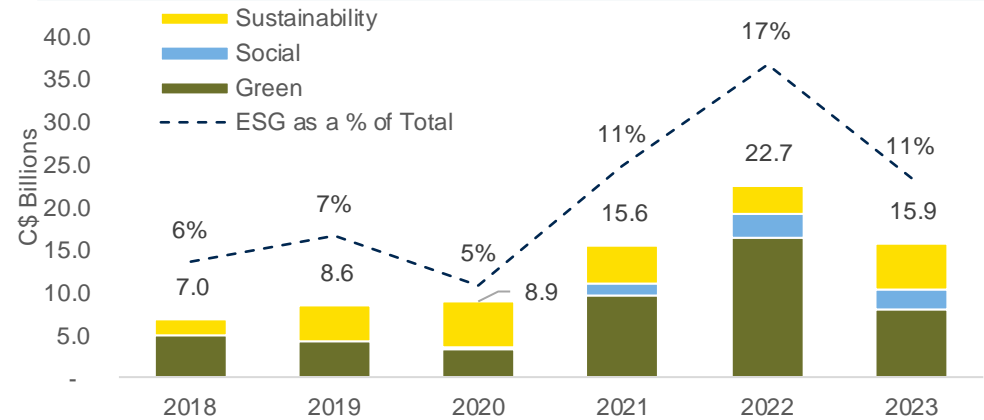
ESG Market Active in December

- There were two Public Sector ESG offerings in December with offerings from Ontario and TransLink for C\$1.8 billion in aggregate
- Ontario completed a C\$1.5 billion re-opening of its February 2032 **Green Bond** offering (RBC JLM)
 - The trade saw books reach in excess of C\$2.1 billion with 47 accounts participating
- TransLink completed a C\$300 million re-opening of its December 2053 **Green Bond** offering (RBC JL)
 - The offering was well received with books in excess of C\$360 million and 32 investors participating
- Public Sector ESG issuance in 2023 reached ~C\$15.9 billion, ~43% behind the C\$22.7 billion priced in 2022. % of ESG of total issuance sits at 11%, above the 5-year average of 9%

Recent ESG Transactions

Trade Date	Issuer	Rating (D/M/S)	Size (C\$mm)	Type	Term	Spread	Inaugural
4-Dec-23	Translink	AA/Aa2/ -	300	Green	20	GoC+121.5	
4-Dec-23	Province of Ontario	AA (Low)/Aa3/A+	1,500	Green	5	GoC+58.0	
16-Nov-23	City of Toronto	AA/Aa1/AA	215	Social	19	GoC+123.0	
7-Nov-23	MFABC	- /Aaa/AAA	350	Sustainability	5	GoC+46.0	
18-Oct-23	City of Vancouver	- /Aaa/AAA	100	Sustainability	10	GoC+81.5	
4-Oct-23	MFABC	AAA/Aaa/AAA	120	Sustainability	10	GoC+81.0	
27-Sep-23	KBN	- /Aaa/AAA	500	Green	3	GoC+41.5	
26-Sep-23	Inter-American Development Bank	- /Aaa/AAA	500	Sustainability	6	GoC+32.6	
15-Sep-23	City of Toronto	AA/Aa1/AA	100	Green	20	GoC+121.5	
12-Sep-23	KfW	- /Aaa/AAA	500	Green	5	GoC+35.1	
7-Sep-23	IBRD	- /Aaa/AAA	1,000	Sustainability	7	GoC+52.0	
24-Aug-23	PSP Capital Inc.	AAA/Aaa/AAA	1,000	Green	8	GoC+64.0	
22-Aug-23	MFABC	- /Aaa/AAA	400	Sustainability	6	GoC+35.0	
10-Aug-23	International Finance Corporation	- /Aaa/AAA	1,000	Green	3	GoC+39.5	
6-Jul-23	Council of Europe Development Bank	- /Aaa/AAA	300	Social	4	GoC+43.0	✓
28-Jun-23	Asian Development Bank	- /Aaa/AAA	1,000	Social	3	GoC+47.8	
8-Jun-23	Province of Quebec	AA (Low)/Aa2/AA-	600	Green	10	GoC+68.0	
31-May-23	IBRD	- /Aaa/AAA	100	Sustainability	5	GoC+0.0	
25-May-23	MFABC	AAA/Aaa/AAA	115	Sustainability	11	GoC+79.0	
11-May-23	Asian Development Bank	- /Aaa/AAA	500	Social	5	GoC+38.4	
9-May-23	Inter-American Development Bank	- /Aaa/AAA	750	Sustainability	5	GoC+38.3	
26-Apr-23	International Finance Corporation	- /Aaa/AAA	500	Social	5	GoC+36.7	
13-Apr-23	IBRD	- /Aaa/AAA	900	Sustainability	5	GoC+0.0	
28-Feb-23	Province of Ontario	AA (Low)/Aa3/A+	1,500	Green	9	GoC+65.5	
22-Feb-23	Ontario Teachers' Finance Trust	AAA/Aa1/AA+	1,000	Green	7	GoC+80.0	
5-Jan-23	IBRD	- /Aaa/AAA	1,000	Sustainability	5	GoC+38.5	

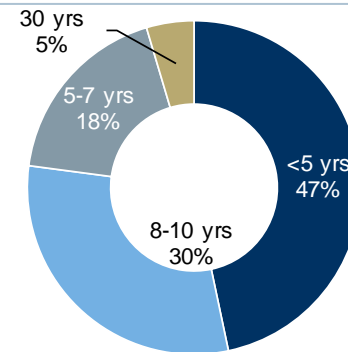
C\$ ESG-Labelled Bonds Historical Issuance Volume



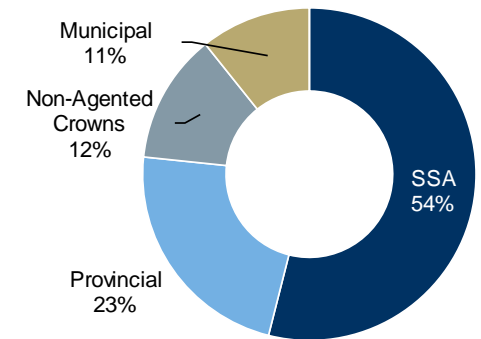
ESG Issuers (2022-2023YTD)



Issuance by Tenor (2023)



Issuance by Type (2023)



12 *GSSS: Green, Social, Sustainability & Sustainability-Linked
Source: RBC Capital Markets. Data as at December 29, 2023

Canadian Public Sector Market Update

Market Update

Issuance Update

Offshore Borrowing

ESG, SSA & Maple Supply

Municipal Supply

Spreads & Ratings

Rates & Timing

Appendix

Canadian SSA Issuers

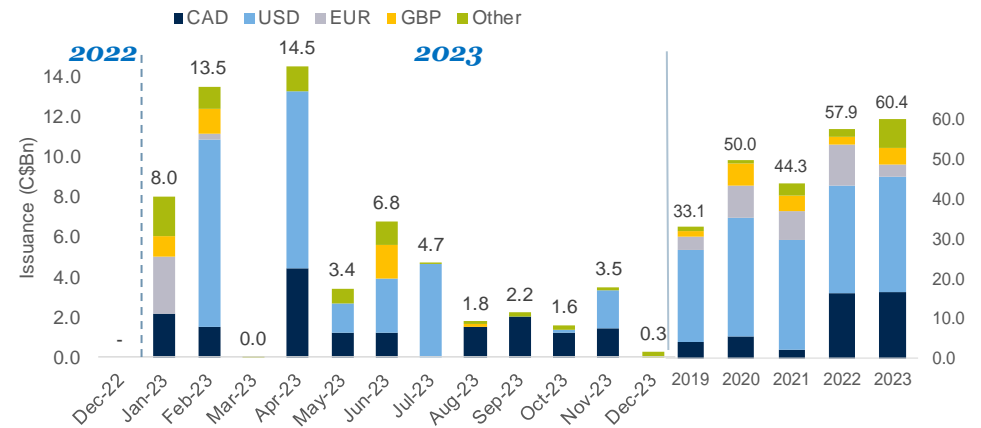
Canadian SSA Market Quiet in December to Close out Record Year

- The Canadian SSA market saw no domestic offerings in December
- Total supply for the sector ended the year at C\$60.4 billion, an increase of ~4% from the C\$57.9 billion seen in 2022,
 - Marked the most active year for the Canadian SSA market on record fueled by increasing Pension Asset Managers/Pension Funds issuances
- Notably, the sector saw a new issuer as BCI inc. completed a C\$1.25 billion inaugural 10-year offering
- EDC was the most active Canadian SSA issuer in 2023 with C\$17.8 billion equiv. completed, while CPP was close behind at C\$16.7 billion equiv.
- Issuance from this sector is expected to remain active in 2024

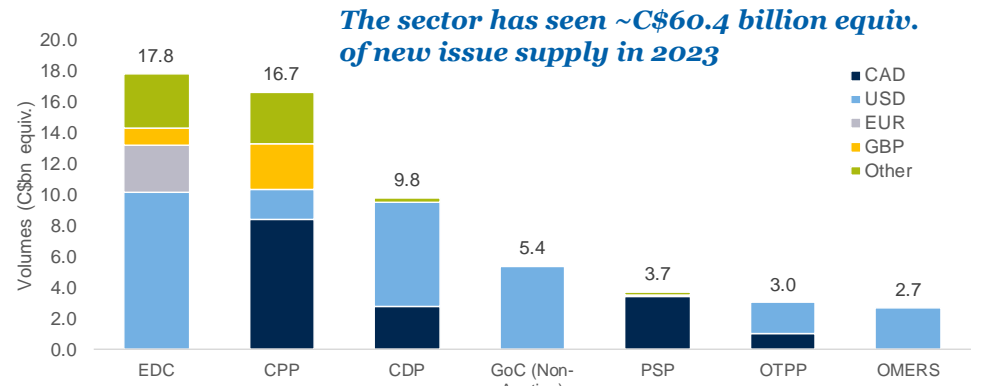
Recent Notable Canadian SSA¹ Transactions

Issue Date	Issuer	Currency	Size (Local Currency MM)	Size (CAD MM)	Maturity Date	Term (yrs)	Issue Spread to Benchmark (bps)	Coupon (%)
Bullets								
28-Nov-23	CDP Financial Inc.	CAD	750	750	1-Dec-30	7	GoC+63	4.200%
27-Nov-23	CPPIB Capital Inc.	CAD	700	700	2-Jun-33	10	GoC+71.5	4.750%
08-Nov-23	OMERS Finance Trust	USD	1,000	1,381	15-Nov-33	10	MS+135	5.500%
23-Oct-23	BCIMCO	CAD	1,250	1,250	1-Jun-33	10	GoC+90.5	4.900%
26-Sep-23	CPPIB Capital Inc.	CAD	1,000	1,000	2-Jun-33	10	GoC+78	4.750%
07-Sep-23	PSP Capital Inc.	CAD	500	500	1-Jun-33	10	GoC+75.5	4.150%
05-Sep-23	CPPIB Capital Inc.	CAD	500	500	8-Mar-28	5	GoC+38	3.250%
24-Aug-23	PSP Capital Inc.	CAD	1,000	1,000	2-Dec-30	7	GoC+64	4.400%
21-Aug-23	CPPIB Capital Inc.	CAD	500	500	2-Jun-32	10	GoC+73	3.950%
25-Jul-23	CDP Financial Inc.	USD	200	263	30-May-25	2	-	5.250%
18-Jul-23	CDP Financial Inc.	USD	1,500	1,977	24-Jul-28	5	MS+62	4.250%
13-Jul-23	CPPIB Capital Inc.	USD	1,500	1,967	20-Jul-28	5	MS+57	4.250%
05-Jul-23	CDP Financial Inc.	USD	350	465	19-May-25	2	-	FRN
27-Jun-23	CPPIB Capital Inc.	GBP	1,000	1,682	6-Jun-25	2	UKT+85	6.000%
21-Jun-23	Export Development Canada	USD	2,000	2,633	29-Jun-26	3	MS+25	4.375%
21-Jun-23	PSP Capital Inc.	CAD	1,250	1,250	6-Jan-33	10	GoC+74.5	4.150%
08-Jun-23	Export Development Canada	AUD	1,000	897	22-Jan-27	4	ASW+31	4.400%
30-May-23	CPPIB Capital Inc.	CAD	500	500	2-Jun-32	10	GoC+72	3.950%
30-May-23	CPPIB Capital Inc.	AUD	500	444	1-Sep-26	3	ASW+45	4.100%
23-May-23	CDP Financial Inc.	USD	500	675	19-May-25	2	-	FRN

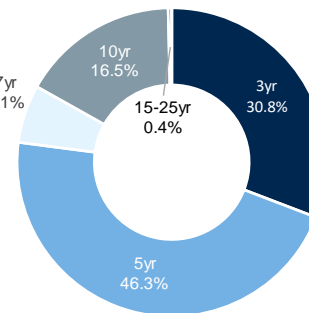
Historical Issuance Volumes (C\$ Equiv.)



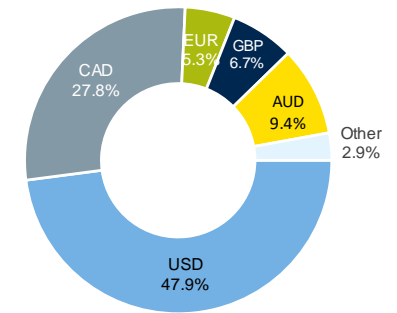
Top Canadian SSA Issuers (2023) (C\$ Equiv.)



Issuance Term (2023)



Issuance by Currency (2023)



131. Sector issuers include CPP, PSP, CDP, OTPP, BCI, OMERS, EDC, and GoC (offshore program)

Maple SSA Issuance

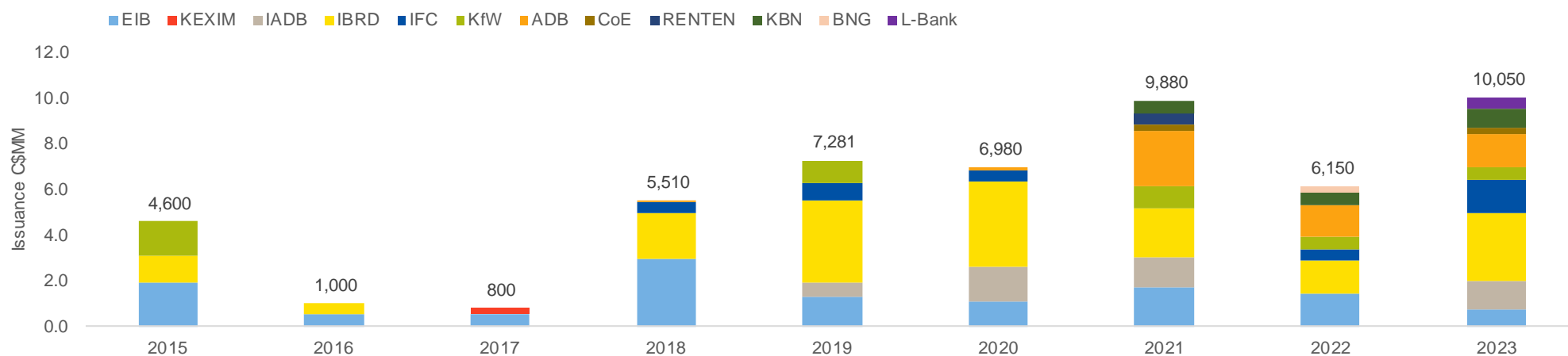
SSA Maple Market Sees Most Active Year on Record

- The Maple SSA market was quiet in December with no new issues
- Sector supply in 2023 reached a new record of ~C\$10.1 billion, ~2% higher than the previous record of ~C\$9.9 billion in 2021. The total number of deals priced was also at an all-time high with 17 transactions done in 2023
 - Sector supply in 2023 was up 63% from the C\$6.2 billion seen in 2022
- ESG issuance was favored among maple SSA issuers, with 13 out of the 17 of the 2023 transactions being in ESG format
- *Trader Comment:* Maple SSAs traded sideways for most of the month, however we saw good sized buying in the latter half of December which helped bring valuations back vs. domestic issuers. The sector overall is on the wider end of the range vs. domestic Ontario and CANHOU bonds

Maple Offerings (2022-2023)

Year	#	Trade Date	Issuer Name	Ratings	Size (C\$MM)	Coupon	Maturity	Spread	ESG
2023	1	27-Sep-23	KBN	-/Aaa/AAA	500	4.900%	5-Oct-26	CORRA MS+24.0bps	✓
2023	2	26-Sep-23	IADB	-/Aaa/AAA	500	4.600%	1-Mar-29	CORRA MS+30.0bps	✓
2023	3	14-Sep-23	LBANK	-/Aaa/AAA	200	4.850%	1-Sep-26	CORRA MS+24.0bps	✓
2023	4	12-Sep-23	KfW	-/Aaa/AAA	500	4.250%	19-Sep-28	CORRA MS+25.0bps	✓
2023	5	7-Sep-23	IBRD	-/Aaa/AAA	1,000	4.250%	18-Sep-30	CORRA MS+39.0bps	✓
2023	6	17-Aug-23	L-Bank	-/Aaa/Aa+	300	4.850%	1-Sep-26	CORRA MS+24.0bps	✓
2023	7	10-Aug-23	IFC	-/Aaa/AAA	1,000	4.500%	21-Aug-26	CORRA MS+14.0bps	✓
2023	8	6-Jul-23	CoE	-/Aaa/AAA	300	4.570%	13-Jan-27	CORRA MS+22.0bps	✓
2023	9	28-Jun-23	ADB	-/Aaa/AAA	1,000	4.400%	13-Jul-26	CORRA MS+15.0bps	✓
2023	10	6-Jun-23	EIB	AAA/Aaa/AAA	700	3.900%	15-Jun-28	CDOR MS+33bps	✓
2023	11	31-May-23	IBRD	-/Aaa/AAA	100	3.700%	18-Jan-28	-	✓
2023	12	11-May-23	ADB	AAA/Aaa/AAA	500	3.300%	24-May-28	CDOR MS 0.0 bps	✓
2023	13	9-May-23	IADB	-/Aaa/AAA	750	3.400%	24-May-28	CDOR MS 0.0 bps	✓
2023	14	26-Apr-23	IFC	-/Aaa/AAA	500	3.300%	10-May-28	CDOR MS 0.0 bps	✓
2023	15	20-Apr-23	KBN	-/Aaa/AAA	300	3.625%	1-Mar-28	CDOR MS +10.0 bps	✓
2023	16	13-Apr-23	IBRD	-/Aaa/AAA	900	3.700%	18-Jan-28	CDOR MS 0.0 bps	✓
2023	17	5-Jan-23	IBRD	-/Aaa/AAA	1,000	3.700%	18-Jan-28	CDOR MS +7.0 bps	✓
Grand Total:					10,050				
2022	1	30-Nov-22	KBN	-/Aaa/AAA	500	3.800%	7-Dec-27	CDOR MS +19.0 bps	✓
2022	2	31-Aug-22	ADB	AAA/Aaa/AAA	700	3.800%	12-Sep-25	CDOR MS -11.0 bps	✓
2022	3	8-Feb-22	KfW	AAA/Aaa/AAA	500	1.750%	17-Mar-25	CDOR MS -25.0 bps	✓
2022	4	1-Feb-22	BNG	-/Aaa/AAA	300	1.800%	10-Feb-25	CDOR MS -21.0 bps	✓
2022	5	14-Jan-22	ADB	AAA/Aaa/AAA	750	1.625%	28-Dec-25	CDOR MS -30.0 bps	✓
2022	6	13-Jan-22	IFC	-/Aaa/AAA	500	1.850%	28-Jan-27	CDOR MS -15.0 bps	✓
2022	7	11-Jan-22	EIB	AAA/Aaa/AAA	1,400	1.900%	22-Jan-25	CDOR MS -31.0 bps	✓
2022	8	6-Jan-22	IBRD	-/Aaa/AAA	1,500	1.800%	19-Jan-27	CDOR MS -16.0 bps	✓
Grand Total:					6,150				

Annual Maple Issuance



Municipal Market Update

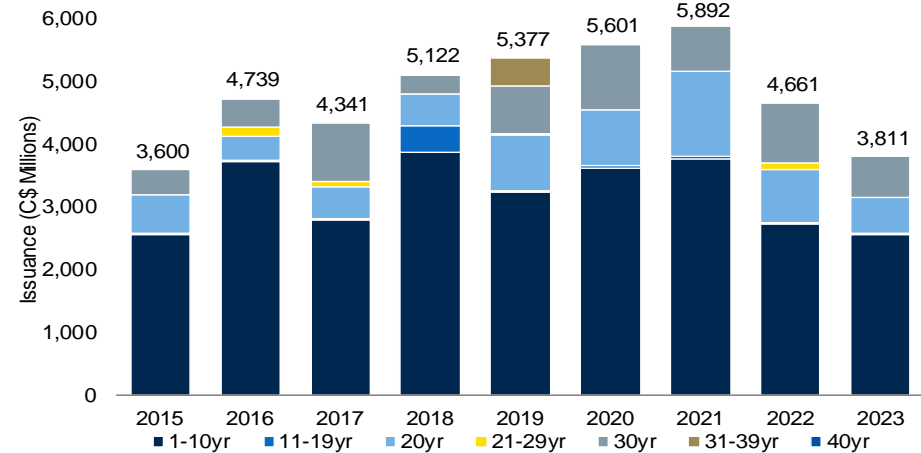
Municipal Market Saw One New Issue in December

- The municipal market saw one new issue in December for C\$300 million
- TransLink completed a C\$300 million 30-year **Green Bond** re-opening (RBC JLM)
 - The transaction was well received by the market with books in excess of C\$360 million and 32 investors participating
- Sector supply ended the year at C\$3.8 billion, marking the lowest level since 2015 as issuers contented with an elevated yield environment
- *Trader Comment:* The TransLink transaction was well received with the basis range bound at the local wides despite the bid in credit. Municipal secondary flows were light in December but were supportive with net real money buying across the curve, and we expect good support at the current valuations for new issue supply looking into 2024

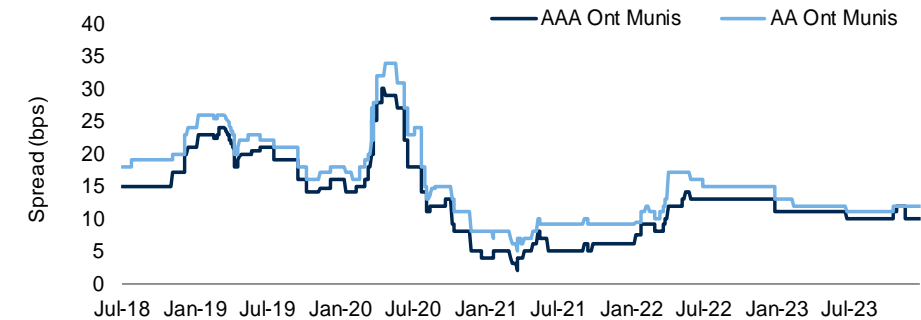
Recent Municipal Offerings ^{1, 2}

Price Date	Issue Description	Size (C\$MM)	Term (yrs)	Spread vs. Bench (bps)	Spread vs. ONT	Re-Offer Yield (%)	Coupon
Bullets							
4-Dec-23	TransLink 12Dec53	300	30	121.5	31	4.517%	4.15%
22-Nov-23	York 8Dec33	150	10	80	12	4.473%	4.45%
20-Nov-23	City of Ottawa 4Jun33	200	10	79.5	10	4.497%	4.45%
16-Nov-23	City of Toronto 27Jul42	215	20	123	27	4.933%	4.55%
7-Nov-23	MFABC 3Dec28	350	5	46	7	4.297%	4.50%
18-Oct-23	City of Vancouver 3Nov33	100	10	81.5	7	4.942%	4.90%
5-Oct-23	City of Montréal 31Aug33	270	10	94	19	5.089%	4.25%
4-Oct-23	MFABC 3Dec33	120	10	81	6	4.961%	4.05%
15-Sep-23	City of Toronto 14Dec42	100	20	121.5	26	4.912%	4.40%
22-Aug-23	MFABC 3Dec28	400	5	35	4.5	4.516%	4.50%
21-Jun-23	City of Toronto 11Jul33	335	10	83	11	4.254%	4.25%
30-May-23	City of Montréal 1Sep33	300	10	95	22	4.225%	4.25%
25-May-23	MFABC 3Dec33	115	10.5	79	7	4.084%	4.05%
18-Apr-23	City of Toronto 1Jun52	350	30	127	32.5	4.460%	4.30%
14-Feb-23	MFABC 1Dec27	120	5	38	4	3.784%	4.95%
6-Feb-23	City of Montréal 1Dec43	250	20	130	32	4.415%	4.40%
5-Dec-22	TransLink 12Dec53	300	30	131.5	35	4.166%	4.15%
28-Nov-22	City of Toronto 13Dec42	300	20	134.5	35	4.419%	4.40%
1-Nov-22	MFABC 1Jun27	330	5	49.5	5	3.882%	3.35%
Serials							
5-Oct-23	Regional Municipality Of Waterloo	60	1-10	11-93	11-17	5.016%	
28-Sep-23	Regional Municipality Of Halton	20	1-15	11-119	11-27	5.143%	
2-May-23	Regional Municipality Of Halton	34.74	1-15	18-122.5	10-28	3.871%	

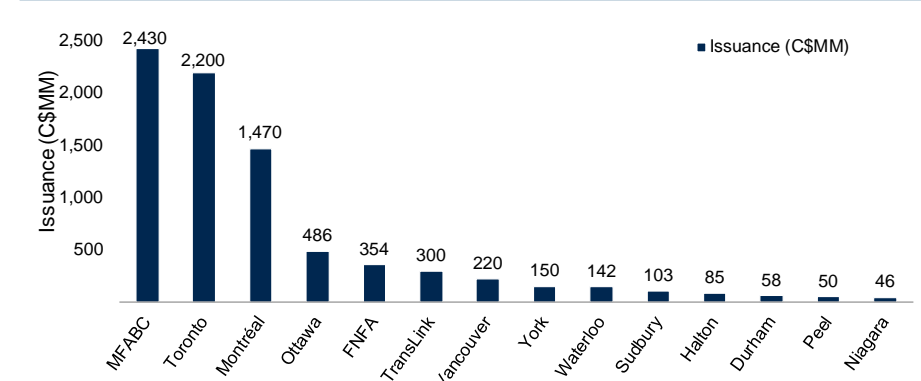
Annual C\$ Municipal Issuance



Municipal 10-year Spreads (vs. ONT) ²



Municipal Issuers (2022-2023) ²



15 1. Excludes Quebec municipal auctions

2. Spreads and issuance levels as of December 29, 2023

Ratings, Fiscal Updates, and Spread Relativities

- On December 5th, Province of Manitoba released its mid-year fiscal update which showed an increased deficit to C\$1.6 billion from \$363 million in Budget 2023
 - The province noted a decline in taxation revenue on the back of a weakening economic environment, and increased pressure with respect to expenditures
 - The borrowing program remains unchanged
- On December 7th, DBRS confirmed the Province of Ontario's AA(L) rating with a positive outlook
 - DBRS noted the province's economy has showed resiliency in the first half of 2023, and despite momentum starting to slow, the slowdown is expected to be temporary, and the rating agency believes the trend of improving fiscal performance will remain intact over the medium-term
- On December 18th, S&P upgraded the Province of Alberta's rating to AA- from A+ with a stable outlook
 - The upgrade comes on the back of Alberta's strong fiscal performance during the current government year with higher oil prices, higher tax revenues, and a focus on cost containment
 - S&P expects that with after-capital surpluses the province's debt will remain fairly stable relative to operating revenues, and liquidity will remain strong

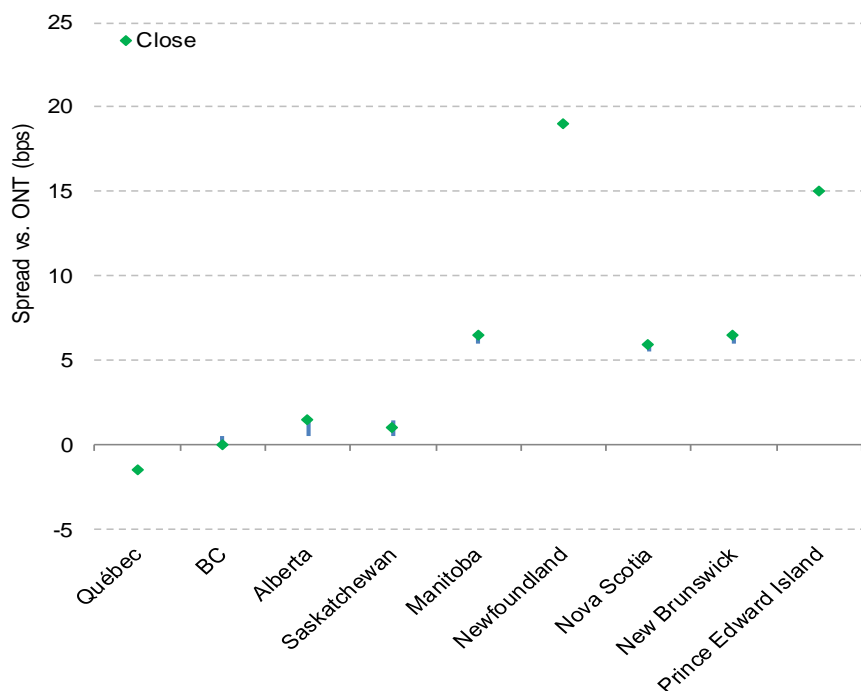
Crowns	Ratings			Spread vs. GoC		
	DBRS	Moody's	S&P	5-Year	10-Year	
Canada Housing Trust	AAA (stb)	Aaa (stb)	AAA (stb)	+21.0 bps CORRA +29.5 SOFR +38.0	+40.5 bps CORRA +45.0 SOFR +55.0	
Provincials	Ratings			New Issue Spreads (Straight Maturities) / Relativities vs. Ontario		
	DBRS	Moody's	S&P	5-Year	10-Year	30-Year
Ontario	AA(L) (pos)	Aa3 (pos)	A+ (pos)	+34.5 bps CORRA +43.0 SOFR +51.5	+67.5 bps CORRA +72.0 SOFR +82.0	+90.0 bps CORRA +96.5 SOFR +119.0
Québec	AA(L) (stb)	Aa2 (stb)	AA- (stb)	(1.0) bp	(1.5) bps	(2.0) bps
British Columbia	AA(H) (stb)	Aaa (stb)	AA (Neg)	0 bp	0 bp	0 bp
Alberta	AA (stb)	Aa2 (stb)	AA- (stb)	0 bp	+1.5 bps	+6.5 bps
Manitoba	A(H) (stb)	Aa2 (stb)	A+ (stb)	+3.0 bps	+6.5 bps	+17.5 bps
Saskatchewan	AA(L) (stb)	Aa1 (stb)	AA (stb)	+0.5 bp	+1.0 bp	+5.5 bps
New Brunswick	A(H) (stb)	Aa2 (pos)	A+ (pos)	+4.0 bps	+6.5 bps	+15.0 bps
Nova Scotia	A(H) (stb)	Aa2 (stb)	AA- (stb)	+3.0 bps	+6.0 bps	+15.0 bps
Newfoundland and Labrador	A (stb)	A1 (stb)	A (stb)	+12.0 bps	+19.0 bps	+38.0 bps
Prince Edward Island	A (stb)	Aa2 (stb)	A (pos)	+8.0 bps	+15.0 bps	+25.0 bps

Spread Performance and Ratings

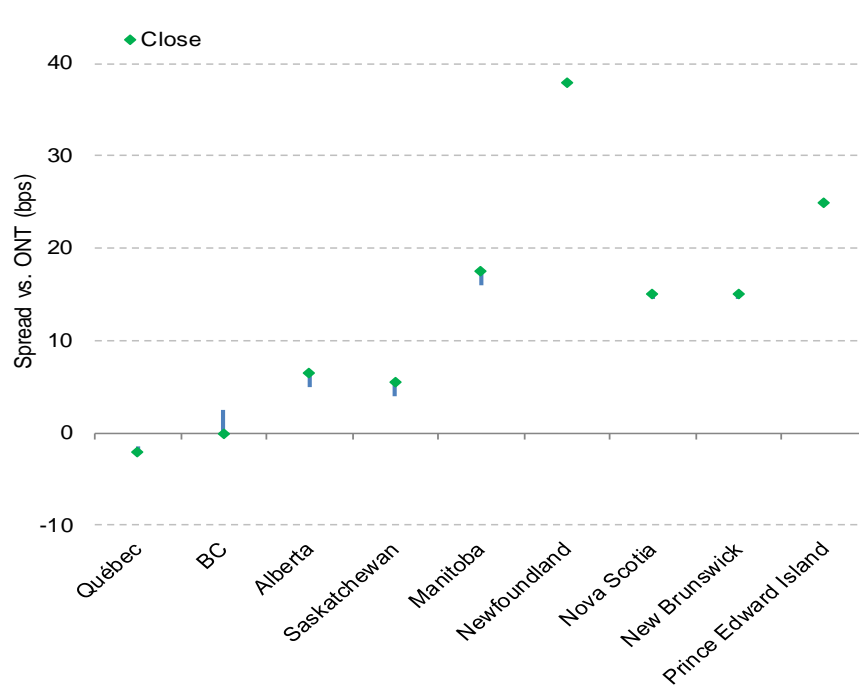
Inter-Provincial Relativities Wider to End 2023

- The majority of the provinces saw their relativities widen in 2023, with larger moves seen in the long-end of the curve
 - Newfoundland was the only province to see their relativities tighten in both 10s and longs, while Saskatchewan outperformed in 10s and Quebec outperformed in longs
- On the year, we saw the following movements in provincial relativities (January-December)
 - Quebec: +0.5bp (10s) / -1bp (30s)
 - British Columbia: +3bps (10s) / +2.5bps (30s)
 - Alberta: +1.5bps (10s) / +6.5bps (30s)
 - Saskatchewan: -0.5bp (10s) / +3.5bps (30s)
 - Manitoba: +2.0bps (10s) / +5.5bps (30s)
 - Newfoundland: -3bps (10s) / -1.0bp (30s)
 - Nova Scotia: +1.0bp (10s) / +4.5bps (30s)
 - New Brunswick: +0.5bp (10s) / +4.0bps (30s)
 - Prince Edward Island: 0bp (10s) / +1.0bp (30s)

Provincial 10-year Relativity Performance (December 2023)



Provincial 30-year Relativity Performance (December 2023)



Rates Outlook

Canadian Rates

Bank of Canada Extends Pause on Rate Hikes in December

- On December 6th, the BoC held their policy rate at 5.0% for a third consecutive meeting
 - The central bank kept the option open for future rate hikes stating that they remain “prepared to raise the policy rate further if needed”, although language around inflationary risk was dropped since the October meeting and a greater emphasis was placed on the weakening economy
- The Canadian labour market softened in November with the unemployment rate ticking higher to 5.8% from 5.7%, with the pace of hiring not strong enough to support the higher labour force growth
- Canadian headline CPI in November saw an upside surprise and was unchanged from the previous print at 3.1% YoY
- Canadian GDP was unchanged for a third straight month in October, coming in softer than expectations
- RBC economics expects the BoC to make their first rate cut mid-2024, contingent on further softening in CPI readings in the coming months

US Rates

Fed Holds Their Policy Rate in December

- On December 13th, as widely expected the US Fed left the Fed Funds target range unchanged at 5.25%-5.50%
 - The accompanying policy statement was little changed from November, although additional language around the slowing economic environment was added
 - Fed Chair Powell reiterated their fight against inflation is not done and the Fed is still willing to raise interest rates if needed, although he confirmed the discussion on when to begin rate cuts has begun among the committee
- The US labour market rebounded in November with the unemployment rate dropping to 3.7% from 3.9%, although job growths has continued to slow
- US headline CPI edged lower in November to 3.1% from 3.2% YoY in October
- RBC economics expects the Fed to keep interest rates steady at their current level before a gradual deterioration in the economic backdrop prompts the Fed to start rate cuts sometime in mid-2024

RBC Economics Interest Rate Forecasts

RBC Interest Rate Forecasts

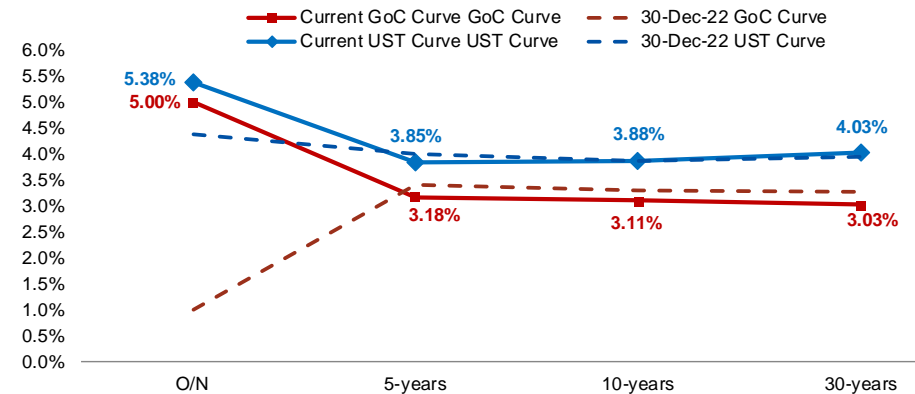
Government of Canada Rates Forecast

Term	Q1/24	Q2/24	Q3/24	Q4/24	Q1/25
BoC Overnight	5.00%	4.75%	4.50%	4.00%	3.50%
5-Year GoC	3.60%	3.40%	3.35%	3.30%	3.30%
10-Year GoC	3.65%	3.50%	3.40%	3.35%	3.35%
30-Year GoC	3.65%	3.60%	3.60%	3.55%	3.50%



Term	Q1/24	Q2/24	Q3/24	Q4/24	Q1/25
Fed Funds Target	5.38%	5.13%	4.63%	4.13%	3.88%
10-Year UST	4.40%	4.20%	4.05%	3.95%	3.90%
30-Year UST	4.50%	4.35%	4.30%	4.25%	4.20%

North American Yield Curves



Bank of Canada Rate Decision Recap

BoC Meeting Date	Rate Action
June 1, 2022	1.50%
July 13, 2022	2.50%
September 7, 2022	3.25%
October 26, 2022	3.75%
December 7, 2022	4.25%
January 25, 2023	4.50%
March 8, 2023	4.50%
April 12, 2023	4.50%
June 7, 2023	4.75%
July 12, 2023	5.00%
September 6, 2023	5.00%
October 25, 2023	5.00%
December 6, 2023	5.00%

January Calendar

January 2024 Calendar & Key Dates

▪ Key global events in January include:

- CAN & US Manf. PMI (Jan 2)
- FOMC Meeting Minutes (Jan 3)
- US Jobless Claims (Jan 4)
- US Non-Farm Payrolls & CAN Jobs Report (Jan 5)
- US CPI (Jan 11)
- US PPI (Jan 12)
- CAN CPI (Jan 16)
- US Retail Sales (Jan 17)
- US New Home Sales (Jan 18)
- CAN Retail Sales (Jan 19)
- BoJ (Jan 22)
- BoC (Jan 24)
- ECB (Jan 25)
- US PCE Deflator (Jan 26)
- FOMC & CAN GDP (Jan 31)

▪ Market Closures:

- Please note the Canadian and US Bond markets will be closed for New Year's Day on January 1
- The US Market will be closed on MLK Day on January 15

January 2024						
SUN	MON 1	TUES 2	WED 3	THUR 4	FRI 5	SAT 6
	 1	 2	3	4	5	6
	New Year's Day	CAN Manf. PMI US Manf. PMI	FOMC Meeting Minutes	US Jobless Claims	US Non-Farm Payrolls US Durable Goods CAN Jobs Report	
7	● 8	9	10	11	12	13
		UST 3-Year Auction	US Wholesale Inv. UST 10-Year Auction	US CPI US Jobless Claims UST 30-Year Auction GoC 2-Year Auction	US PPI	
14	 15	16	17	18	19	20
	MLK Day	CAN CPI	US Retail Sales UST 20-Year Auction	US New Home Sales US Housing Starts US Jobless Claims UST 10-Year Auction GoC 5-Year Auction	CAN Retail Sales	
21	22	23	24	25	 26	27
	BoJ	UST 1-Year Auction UST 2-Year Auction	BoC US Manf. PMI UST 2-Year Auction UST 5-Year Auction	ECB US Jobless Claims US GDP & Wholesale Inv. US Durable Goods UST 7-Year Auction GoC 10-Year Auction	US PCE Deflator	
28	29	30	31			
			FOMC CAN GDP			
Legend: Canadian Data US Data AUS/EU/UK Data						

Appendix I

Canadian Sustainable Debt
Market



RBC Capital Markets

Canadian Debt Capital Markets | 2023 Review & 2024 Outlook

Canadian Sustainable Debt Market

C\$24.1 billion of Supply in 2023

The CAD ESG market saw steady supply in 2023 highlighting the continued demand for product, although volume was below the prior year record of C\$30.3 billion

Both Public and Private Sector Issuers Drove ESG Activity in 2023

66% of total ESG issuance was from the public sector (C\$15.9 billion), while 34% was from the corporate sector (C\$8.2 billion) in 2023

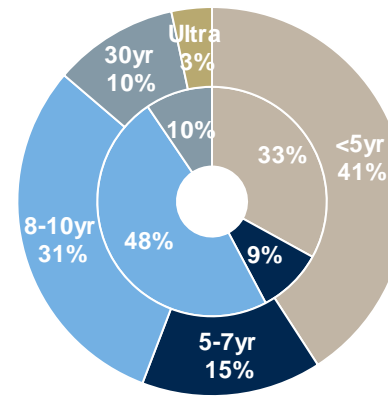
Demonstrated Benefit of ESG Issuance

Growing pool of capital dedicated to ESG with some offerings achieving a price advantage (“greenium”)

Healthy Inaugural ESG Issuance and Continued Market Expansion

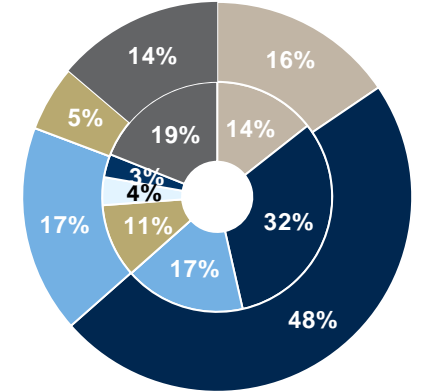
4 of the 26 issuers in 2023 were inaugural ESG names highlighting the continued growth in the segment to increase the total issuer base to 70

Issuance by Tenor



Inside: 2022 Outside: 2023

Issuance by Type (Corps only)



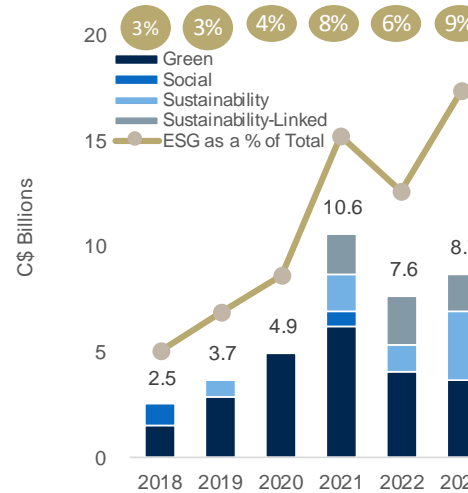
Inside: 2022 Outside: 2023

- Communications
- Energy / Utility
- Financials
- Industrial & General
- Infrastructure & Public Finance
- Natural Resources
- Project Finance
- Real Estate

Select Recent RBC-Led CAD ESG Offerings

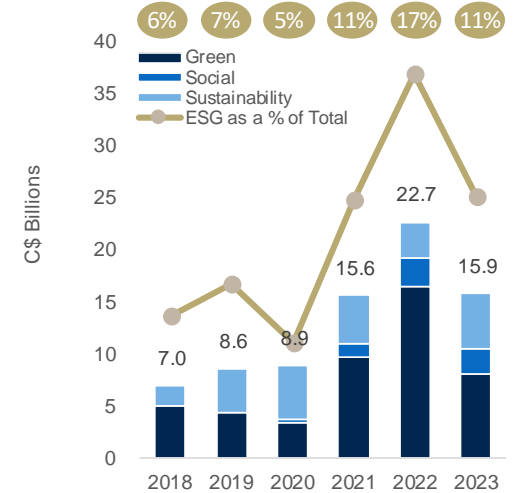
 C\$1 billion C\$1 billion 4.25% due 18Sep30 & 3.70% due 18Jan28 Sustainability Bonds Joint Bookrunner September 7 & January 5, 2023	 C\$1.05 billion C\$425 million C\$400 million Nov29, Jan33 & Jan53 Sustainability Bonds; Sep26 Green Bond; Oct25 Green Bond Joint Bookrunner October 16, September 18 & January 24, 2023	 C\$1 billion C\$500 million 4.40% due 13Jul26 Health Bonds; 3.30% due 24May28 Gender Bonds Joint Bookrunner May 11 and June 28, 2023	 C\$1.5 billion 4.90% due 26May28; 5.36% SLB due 26May33; 5.76% due 26May53 Joint Bookrunner May 23, 2023
 C\$300 million 4.994% due 2Jun28 Sustainability Bonds Joint Bookrunner May 30, 2023	 C\$300 billion Inaugural CAD Social Inclusion Bond 4.570% due 2027 Joint Lead Manager & B&D July 6, 2023	 C\$1 billion Green Bond 4.500% due 2026 Joint Lead Manager August 10, 2023	 C\$1 billion 4.40% due 2Dec30 Green Bonds Joint Lead August 24, 2023

Corporate ESG-Labelled Bonds



	2018	2019	2020	2021	2022	2023
# of Unique Issuers	15	20	19	35	33	29
Aggregate unique issuers	18	27	35	54	66	70

SSA ESG-Labelled Bonds



21 *GSSS: Green, Social, Sustainability & Sustainability-Linked
 Source: RBC Capital Markets. Data as at December 13, 2023

Bloomberg ESG Indicators:

- Green
- Social
- Sustainability
- Sustainability-Linked

Appendix II







Corporate Funding Highlights



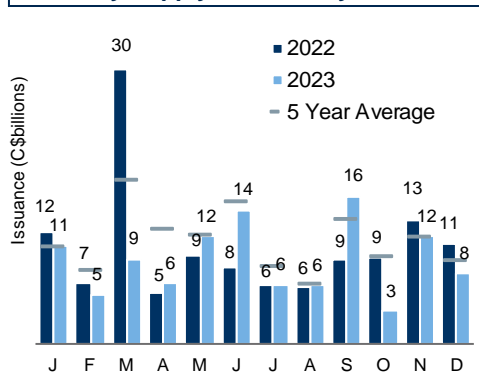
RBC Capital Markets

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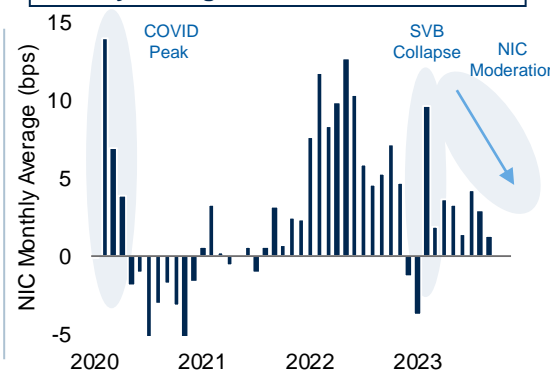
2023 Review & Key Market Themes⁽¹⁾

	2023 Review	2024 Outlook	Select Transactions
C\$ Supply	<ul style="list-style-type: none"> Debt markets remained well supported through the course of the year despite periods of heightened volatility stemming from bank failures, the US regional banking crisis, geopolitical risk and the elevated rate environment Corporate supply of C\$108.5 billion was supported by a rebound in corporate issuance (up 37% Y/Y), but insufficient to offset reduced financial issuance, primarily from the domestic banks, with total volume declining 14% overall 	<ul style="list-style-type: none"> Issuance in 2024 should remain steady aided in part by the C\$89 billion of maturities (up 15% Y/Y) that are slightly skewed to the financial sector, although funding needs will ultimately be dictated by the broader economic backdrop Potential improvement in funding costs given the expectation that rates may decline with the possible implementation of more accommodative policies by central banks starting in mid 2024, notwithstanding any black swan events that could spike volatility 	Multi-Tranche Financings <div style="display: flex; justify-content: space-between;"> <div style="width: 45%;">  <p>C\$1,750,000,000 4.15% due 10May30 4.40% due 10May33 4.70% due 10May53 Senior Unsecured Notes</p> <p>Joint Bookrunner May 8, 2023</p> </div> <div style="width: 45%;">  <p>C\$3,000,000,000 5.65% due 21Sep26 5.70% due 21Sep28 5.80% due 21Sep30 5.90% due 21Sep33 Senior Unsecured Notes</p> <p>Joint Bookrunner September 7, 2023</p> </div> </div>
Market Demand & Tone	<ul style="list-style-type: none"> Credit markets remained resilient and open throughout most of 2023 as investor demand remained supportive during periods of relative stability The heightened rate environment provided an attractive opportunity for investors, while offerings were generally characterized by notable oversubscriptions and broad distribution 	<ul style="list-style-type: none"> The new issue market should remain well supported driven by technical tailwinds including continued inflows into fixed income product Investors will remain focused on upcoming central bank meetings with regards to forward looking language as well as key economic data releases regarding inflation, GDP, and employment that will dictate market dynamics 	M&A Financings <div style="display: flex; justify-content: space-between;"> <div style="width: 45%;">  <p>C\$1,000,000,000 US\$2,000,000,000 60NC5 and 60NC10 Fixed-to-Fixed Subordinated Notes</p> <p>Lead Left Bookrunner September 26, 2023</p> </div> <div style="width: 45%;">  <p>C\$1,500,000,000 5.60% due 17Nov25 5.40% due 17Nov26</p> <p>Joint Bookrunner November 9, 2023</p> </div> </div>
Central Bank Actions and Funding Costs	<ul style="list-style-type: none"> Central banks across global markets maintained highly restrictive policies to subdue stubbornly high inflation with North American rates reaching levels of 5% which have not been seen since prior to the financial crisis The significant increase in yields through the year reversed course in the final months by rallying ~70-90 bps on the back of softer economic data despite central bank rhetoric of policies remaining higher for longer Although yield curves remain significantly inverted, credit spreads performed well during the year 	<ul style="list-style-type: none"> With labour markets loosening and softer economic data tempering terminal rate concerns on both side of the border, possible rate cuts will be the center of attention in 2024 RBC Rates Strategy predicts that the BoC and the Fed will try to cultivate a soft landing by gradually introducing cuts in mid 2024, at which point the yield curve may start to steepen Credit spreads should remain well supported driven by continued investor demand, subject to event risk 	Inaugural <div style="width: 100%;">  <p>C\$500,000,000 5.993% due 23May30 6.492% due 12Sep53</p> <p>Joint Bookrunner May 17, 2023</p> </div> Liability Mgmt <div style="width: 100%;">  <p>C\$703,000,000 Up to C\$1 billion Tender Offer</p> <p>Sole Dealer Manager May 19, 2023</p> </div>

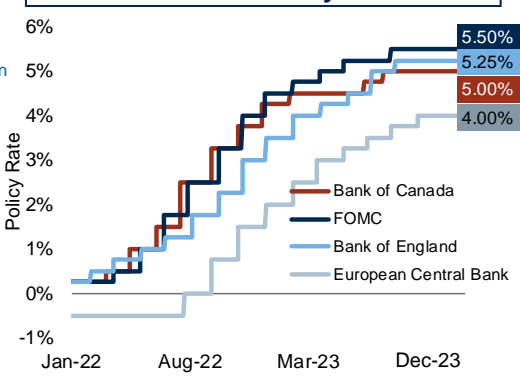
Primary Supply Volumes by Month⁽¹⁾



Monthly Average New Issue Concessions



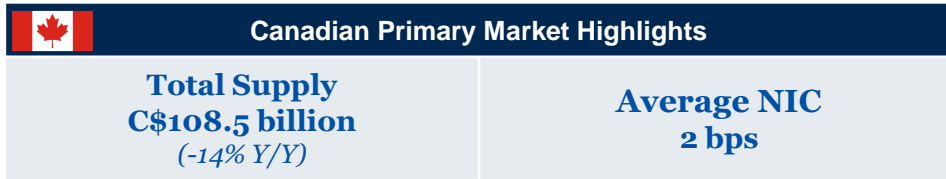
2022 & 2023 Policy Rates



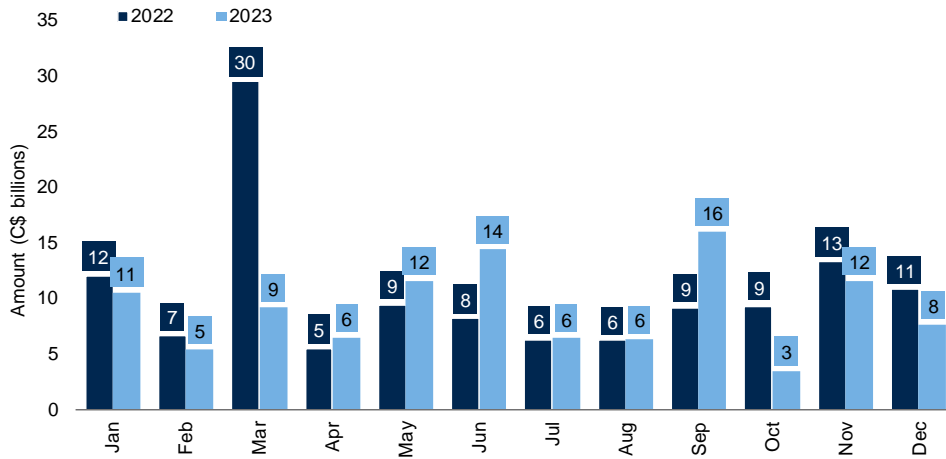
23 (1) Data as at December 14, 2023
Source: RBC Capital Markets

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North American Primary Supply Overview

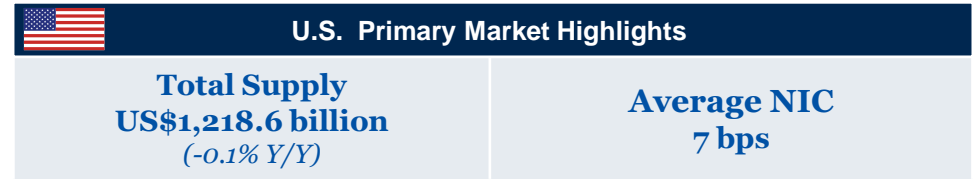
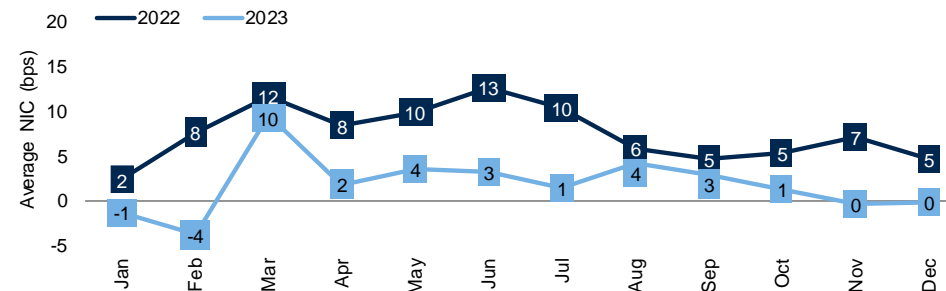


C\$ Monthly New Issue Supply⁽¹⁾

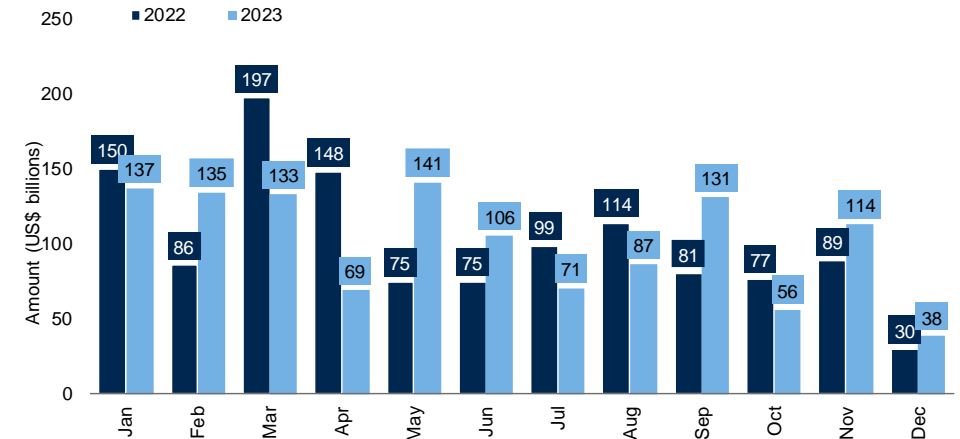


- The Canadian primary market saw reduced supply led by the major Canadian banks, with issuance more concentrated in select months
- Average new issue concessions declined and remained below the prior year driven by technical factors including reduced volume and inflows into fixed income

C\$ Monthly Average New Issue Concessions⁽¹⁾

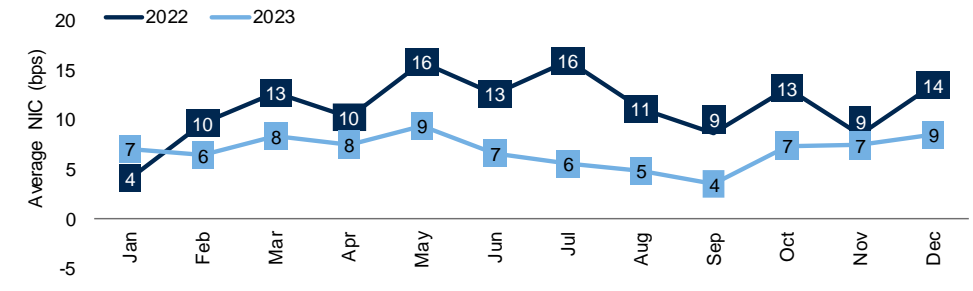


US\$ Monthly New Issue Supply⁽²⁾



- The US primary market saw healthy issuance that was in-line with 2022 as supply was distributed fairly evenly throughout the year
- Average new issue concessions were lower during the year reflecting the underlying bid for credit amongst investors as supply was well received

US\$ Monthly Average New Issue Concessions⁽²⁾



Expect issuance to remain well received while issuers may look to capitalize on the recent rally in underlying rates

24 (1) Source: RBC Capital Markets, as of December 14, 2023

(2) Source: Credit Flow Research

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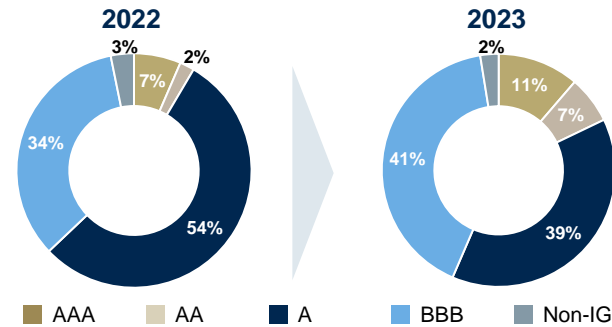
Canadian Corporate Primary Market Overview

	2023 Supply	2024 Maturities	2023 Review	2024 Outlook
Financials	C\$56.3 bn (-34%)	C\$50.1 bn	<ul style="list-style-type: none"> Despite a rise in government yields driven by multiple rate hikes and inflationary pressures that drove all-in funding costs higher, the new issue market remained active with C\$108.5 billion of supply while issuers navigated an inverted yield curve and looked to capitalize on the improvement in credit spreads through the year 2023 saw a 37% increase in non-financial corporate issuance which accounted for 44% of total supply (vs 28% in 2022), ultimately offsetting a portion of the decline in financial issuance 	<ul style="list-style-type: none"> As inflation is expected to moderate in addition to a potential economic slowdown, yields should also decrease in 2024 as central banks may also commence their cutting cycle, ultimately providing more attractive funding costs for issuers, which coupled with an expected C\$89 billion in maturities in 2024 should keep issuance steady, subject to event risk Investor demand for fixed income should also remain elevated to capitalize on still higher coupons
Corporates	C\$47.7 bn (+37%)	C\$32.0 bn		
Securitization	C\$4.5 bn (-13%)	C\$6.8 bn		
Total	C\$108.5 bn (-14%)	C\$88.9 bn		

Breakdown by Sector

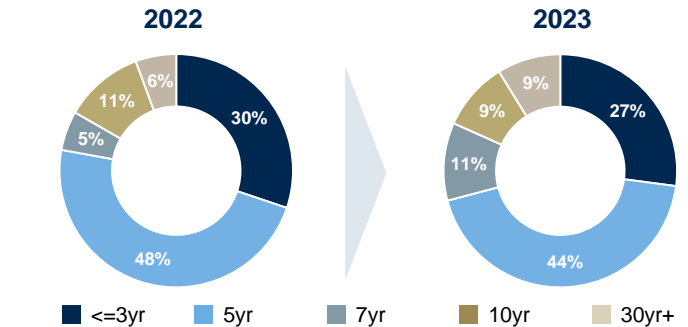
Sector	2022		2023		YY Change	
	C\$bn	% Tot	C\$bn	% Tot	C\$bn	Δ%
Banks	77.1	61%	40.4	37%	(36.8)	▼ (48%)
Non-Bank Financials	8.8	7%	16.0	15%	7.2	▲ +82%
Financials	85.9	68%	56.3	52%	(29.6)	▼ (34%)
Energy / Utilities	14.8	12%	19.7	18%	4.8	▲ +32%
CME	7.5	6%	9.1	8%	1.6	▲ +21%
Real Estate	2.5	2%	6.6	6%	4.1	▲ +165%
Industrials	1.6	1%	4.1	4%	2.5	▲ +161%
Infrastructure	4.6	4%	3.3	3%	(1.3)	▼ (28%)
Consumer / Retail	2.4	2%	2.8	3%	0.4	▲ +15%
Pension Realty	1.0	1%	0.7	1%	(0.3)	▼ (30%)
Natural Resources	0.4	0%	1.5	1%	1.1	▲ +251%
Non-FI Corporates	34.8	28%	47.7	44%	12.9	▲ +37%
Securitization	5.2	4%	4.5	4%	(0.7)	▼ (13%)
Total Supply	125.9	100%	108.5	100%	(17.4)	▼ (14%)

Evolution of Total Supply by Rating



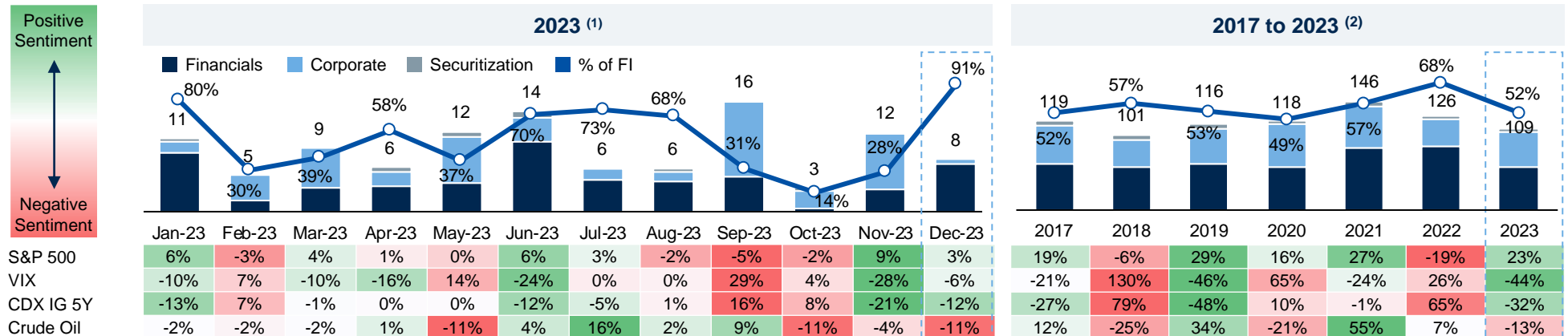
Over the past year, BBB rated issuance has increased to account for a greater proportion of supply

Evolution of Total Supply by Tenor



With respect to the fulls corporate sector, tenors of 5 years and under continued to account for the majority of issuance

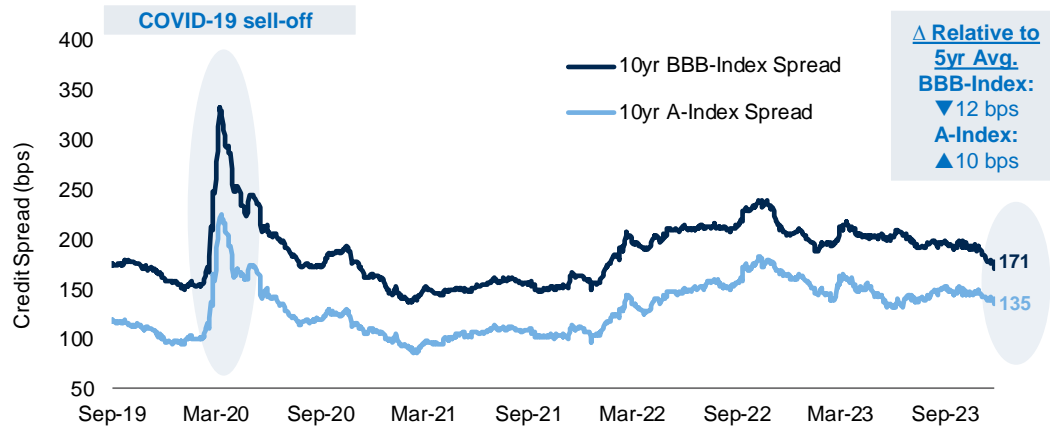
Supply Overview by Sector



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Credit Spread Performance

Credit Spread Index Performance⁽¹⁾



Credit spreads tightened throughout 2023 due to the technical bid for credit, with moderate forward-looking supply expectations keeping credit spreads well anchored

Outlook for Credit Spreads

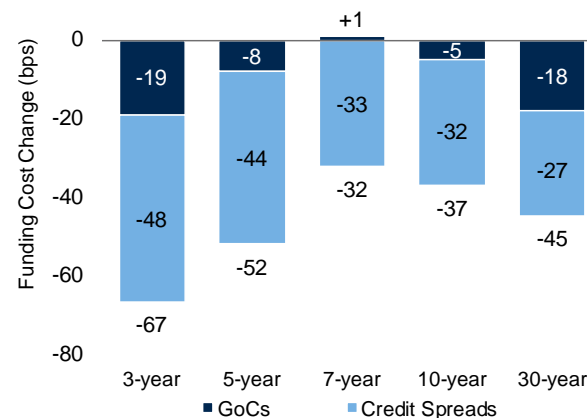
Key Drivers	Spread Impact
Macroeconomic Considerations <ul style="list-style-type: none"> Event risk will continue to influence investor sentiment as macroeconomic volatility persists Softer output and the gradually cooling labour market reaffirm investor expectations that the BoC is not likely to pursue further hike rates 	<p>▲</p> <p>◀▶</p>
Rates <ul style="list-style-type: none"> Anticipation of rate cuts in light of cooling inflationary data and progress to achieve a 2% inflation target 	<p>◀▶</p>
Market Technicals <ul style="list-style-type: none"> Expectation of non-financial new issue volumes in-line with 2023 should sustain the technical bid for credit as investors look to deploy cash Continued refinancing in light of a steady maturity calendar and opportunistic liability management initiatives 	<p>▼</p> <p>◀▶</p>
Corporate Fundamentals <ul style="list-style-type: none"> Increased appetite for corporate supply after moderate issuance in 2023 likely to keep spreads well supported 	<p>▼</p>

Quarterly Spread Performance by Sector⁽²⁾

	2022	Q1 2023	Q2 2023	Q3 2023	Q4 2023	2023
Oil & Gas	(8)	+11	(20)	(11)	(7)	(27)
Corporate Infrastructure	+10	+2	(14)	(2)	(9)	(23)
Power Generation	+11	+1	(15)	(12)	(4)	(30)
Utilities	+10	(4)	(10)	(2)	(13)	(29)
Retail	+1	(1)	(19)	(8)	(14)	(42)
Telcos	(4)	(2)	(15)	(1)	(25)	(43)
Midstream and Pipes	(9)	(5)	(21)	(3)	(18)	(47)
Senior Bail-in	(1)	(8)	(4)	(6)	(12)	(30)
Insurance	+19	(1)	(22)	(5)	(17)	(45)
Captive Finance	(4)	(4)	(15)	(8)	(17)	(44)
Real Estate	+42	+16	(28)	(7)	(19)	(38)
Average Δ Spreads	+6	+0	(17)	(6)	(14)	(36)

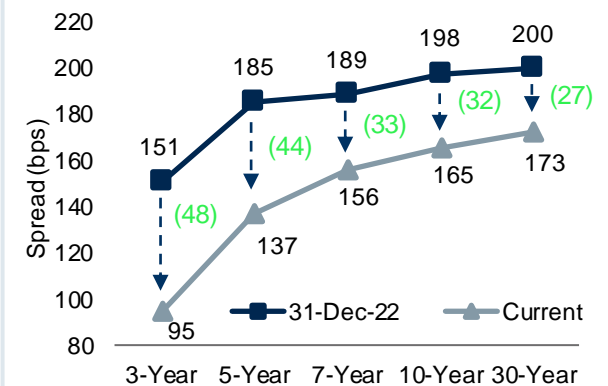
Credit spreads tightened notably throughout 2023 across all sectors

All-in Funding Cost Change in 2023 (by Tenor)⁽²⁾



All-in funding costs tightened 32-67 bps, particularly as credit spreads remained well supported while rates posted a dramatic rally since the beginning of October

Shape of the Credit Curve (2023)⁽²⁾



The credit curve steepened in 2023 given demand for shorter-end supply as investors focused on lower duration given the rate volatility

Appendix III

Canadian and US Swap Market Update



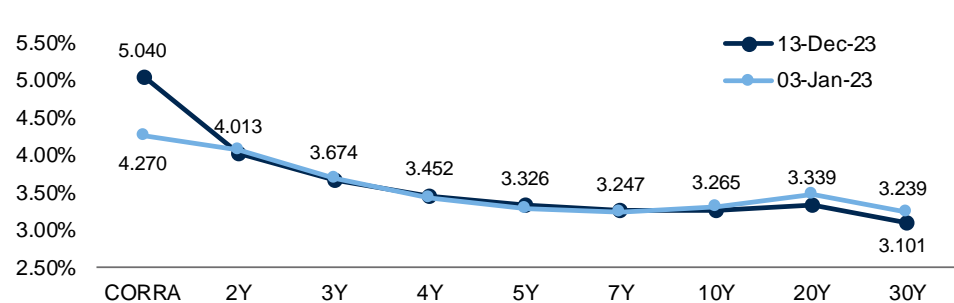
RBC Capital Markets

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Canadian and US Swap Market Update

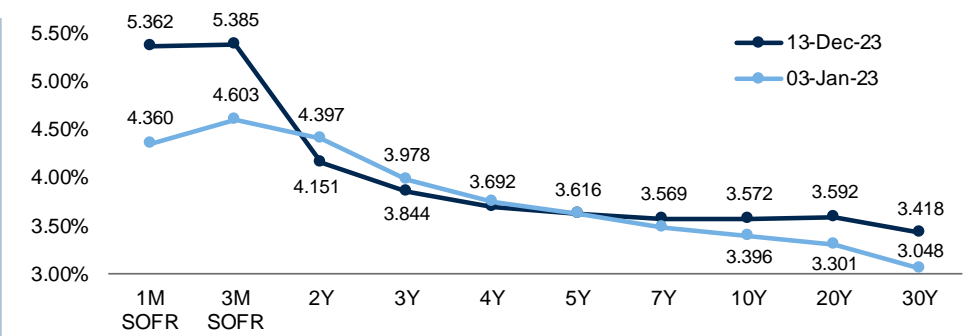
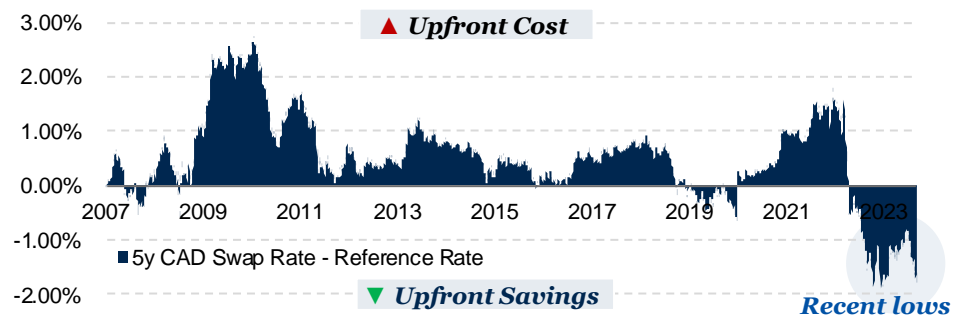
- 2023 saw continued volatility in both Canadian and US rate markets as the BoC and Fed navigated recessionary fears and the possibility of achieving a soft landing
 - Swap rates on both sides of the border rose sharply in H1 as the hiking cycle took off and markets adopted the view that rates would remain “higher for longer”, as economic data continued to demonstrate excess demand in the economy despite the magnitude of rate hikes
 - Canadian and US dynamics diverged heading into H2. In Canada, inflation remained high despite GDP shrinking into negative territory, while in contrast the US economy remained robust despite cooling price pressures
 - Q4 marked a turning point in yields as data softened and the monetary policy bias shifted from hiking to cutting with a potential risk of a hard landing
- In Canada, swap rates remained relatively anchored and moved up to 4 bps higher or 14 bps lower, while US swap rates rose up to 37 bps in a steepening move as the shape of the curve normalized though still remains inverted
 - Looking ahead, a renewed rise in term premium as normalization continues could be the biggest source of upside rate risk, eroding positive carry from swapping to fixed
- CAD OIS is pricing in up to 5 cuts by the end of 2024 with the first cut expected to happen by H1 2024, closely tracking expectations in the US
- Thematically, issuers have continued to take advantage of the yield curve inversion, opportunistically fixing their floating rate exposure and locking in forward rates at negative premiums, with the upfront benefit realized from swapping to fixed becoming more attractive as the swap tenor increases

Swap Curve & Upfront Savings from Swapping to Fixed



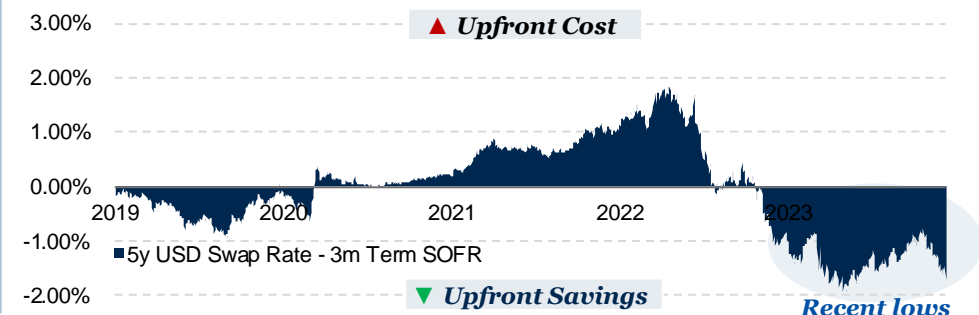
	2-year	3-year	5-year	10-year	30-year
Swap Rate	4.013%	3.674%	3.326%	3.265%	3.101%
Δ 2023	(5 bps)	(1 bps)	+4 bps	(3 bps)	(14 bps)
Savings vs. CORRA	(103 bps)	(137 bps)	(171 bps)	(178 bps)	(194 bps)

Historical Savings – Swapping to Fixed



	2-year	3-year	5-year	10-year	30-year
Swap Rate	4.151%	3.844%	3.616%	3.572%	3.418%
Δ 2023	(25 bps)	(13 bps)	(0 bps)	+18 bps	+37 bps
Savings vs. 3m SOFR	(123 bps)	(154 bps)	(177 bps)	(181 bps)	(197 bps)

Historical Savings – Swapping to Fixed



Appendix IV

Global Rates Outlook



RBC Capital Markets

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Global Central Bank Developments and Outlook

Summary and Outlook for Central Bank Activities⁽¹⁾



- The BoC left the overnight rate steady at 5% in the December meeting, amid further signs of softer economic data (second consecutive real GDP pullback) and a higher unemployment rate rising to 5.8% in November from 5.0% at the start of the year
- Higher interest rates are working to quell CPI figures as they have come off their peak in June 2022, however core inflation has been more persistent

Policy Rate	2022	2023	2024E
Start	0.25%	4.25%	5.00%
# of Hikes	7	3	--
Impact (bps)	+400	+75	-100
End	4.25%	5.00%	4.00%



- In December, the FOMC held the Fed funds rate at 5.25%-5.50% for a third consecutive meeting which was in-line with expectations and signaled the end of the hiking cycle by forecasting a series of rate cuts next year
- The committee also acknowledged that inflation "has eased over the past year but remains elevated" and lowered their inflation forecasts, but signaled that policy will remain data dependent

Policy Rate	2022	2023	2024E
Start	0.25%	4.50%	5.50%
# of Hikes	7	4	--
Impact (bps)	+425	+100	-125
End	4.50%	5.50%	4.25%



- The BoE kept rates unchanged at 5.25% for the third consecutive meeting in December and maintained its message that borrowing costs will remain elevated for some time to curb inflation despite growing expectations of potential cuts in 2024
- Policy makers were split with 3 of the 9 members supporting a hike highlighting that the BoE will likely trail the Fed and ECB in easing its monetary policy

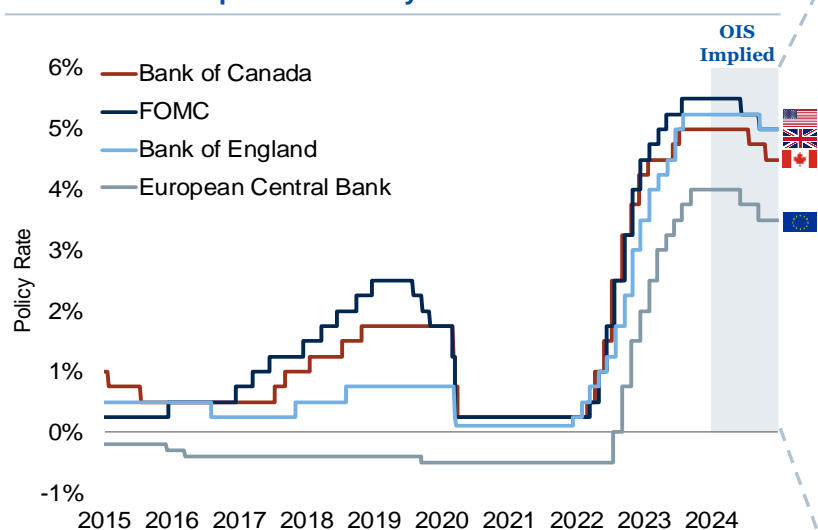
Policy Rate	2022	2023	2024E
Start	0.25%	3.50%	5.25%
# of Hikes	8	5	--
Impact (bps)	+325	+175	--
End	3.50%	5.25%	5.25%



- The ECB held the deposit rate at 4% for the second consecutive meeting in December and stated that future decisions will be data dependent and set at sufficiently restrictive levels for as long as necessary
- Despite inflation subsiding and the ECB reducing its inflation forecast, the ECB is not expected to pivot to a more accommodative stance in the near-term

Policy Rate	2022	2023	2024E
Start	-0.50%	2.00%	4.00%
# of Hikes	4	6	--
Impact (bps)	+250	+200	--
End	2.00%	4.00%	4.00%

Historical and Implied OIS Policy Rates⁽²⁾



Geography

RBC Rates Strategy / RBC Economics 2024 Outlook⁽¹⁾

Key Events in 2024



Expected to hold rates until mid-2024 before easing in Q3 2024; expectation for rate cuts down to 4.00% by Q4 2024

Federal Budget (Feb-Apr), G7 Summit (Jun 6-8)



RBC Economics currently expects a Q2 2024 rate cut that is in-line with market expectations; forecast a gradual cutting cycle (~5 rate cuts during 2024) where the Fed will attempt to prevent a hard landing

Treasury Financing Estimates (Jan 29), Presidential Election (Nov 5)



RBC believes that this marks the end of the MPC's current hiking cycle and expects them to hold rates at 5.25% throughout 2024

UK Election (expected in Oct/Nov 2024, no later than Jan 2025)



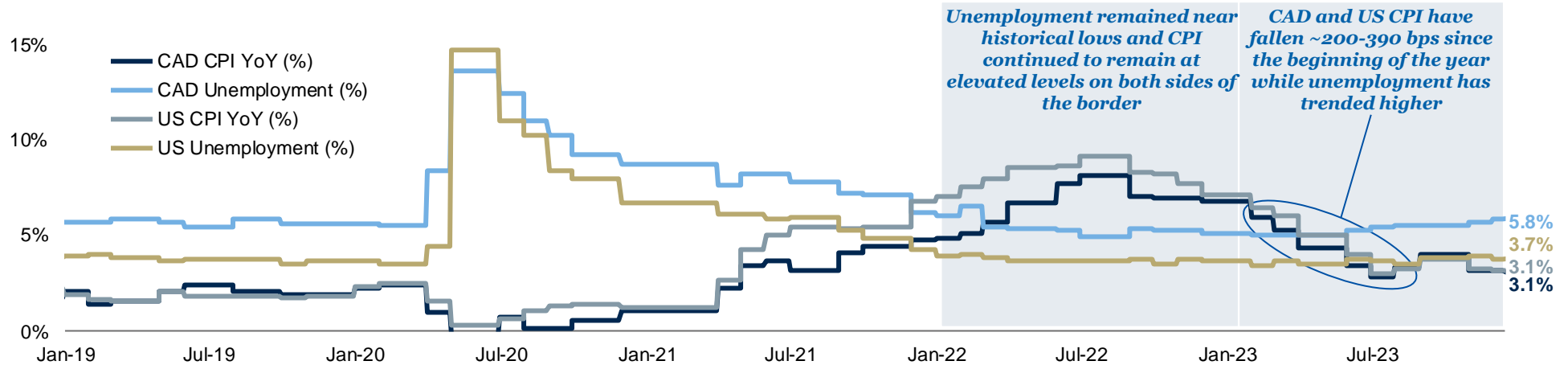
Energy prices will remain a focal point for headline inflation with modest strengthening in household consumption throughout the year; RBC expects the ECB to remain on hold at current levels until the end of 2024

Euro zone fiscal policy (Q1), EU Parliament Elections (Jun 6-9)

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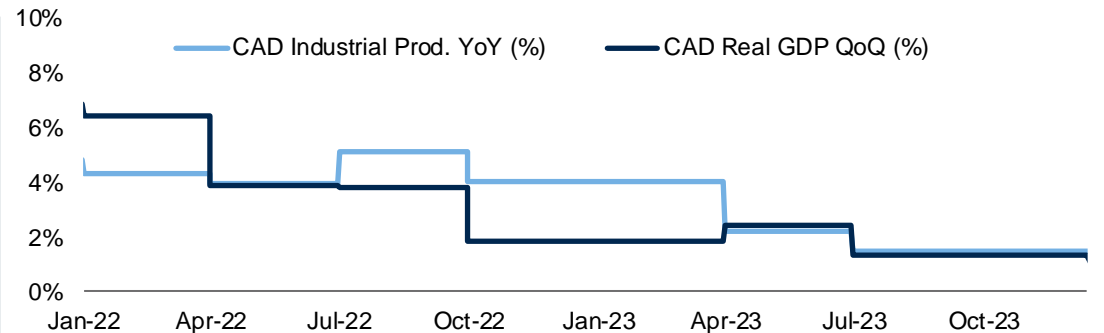
Economic Data Overview: Higher for Longer Rates or Soft Landing?

Softening Economic Growth and Cooling Labor Demand Keep Central Banks on the Sidelines⁽¹⁾



Softening Economic Data

- Canada has seen signs of softening economic performance driven by slowing hiring activity, a pull-back in GDP, as well as lower manufacturing output
 - Given the rapid rise in population, labor markets will be a key focal point as slowing labour demands could moderate wage growth moving forward
- The Canadian housing market remains resilient, notwithstanding the gradual decline in residential housing prices from higher inventory levels and weaker sale home resales across all Canadian provinces



Looking Ahead

- Domestically, higher rates and household leverage continue to weigh on broader economic activity while RBC forecasts a "shallow recession" where growth in 2024 will trend below historical standards and the unemployment rate will increase by 200 bps from trough to peak
- RBC Economics predicts that inflation will gradually moderate alongside softening product and labour markets, but cautions that the BoC will need to pivot to rate cuts prudently to avoid outsized volatility events
- South of the border, the Fed signaled the end of the hiking campaign and forecast a series of cuts next year, with RBC Rates Strategy is predicting five 25 bps rate cuts through 2024

Economic Forecasts⁽¹⁾⁽²⁾

	Current	Q4/23	Q1/24	Q2/24	Q3/24	Q4/24
CAD						
CAD CPI YoY (%)	3.1	2.8	2.7	2.2	1.4	1.6
CAD Unemployment (%)	5.8	5.9	6.5	6.6	6.5	6.4
CAD Real GDP QoQ (%)	1.4	-0.5	0.3	1.4	2.0	2.6
CAD Industrial Prod. YoY (%)	1.5	0.2	0.0	-0.1	0.3	1.1
CAD Housing Starts (000s)	274.7	241.0	246.0	260.0	272.0	285.0
US						
US CPI YoY (%)	3.1	3.1	2.7	2.6	2.3	2.3
US Unemployment (%)	3.7	3.8	4.0	4.4	4.5	4.5
US Real GDP QoQ (%)	2.1	1.0	0.0	-1.0	1.0	1.5
USDCAD	1.35	1.38	1.39	1.39	1.35	1.31

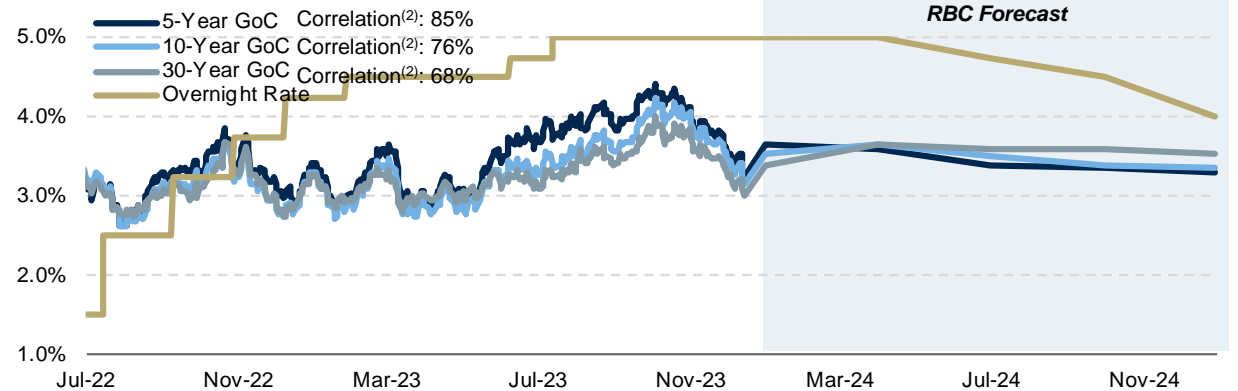
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North American Interest Rates

Term yields have been ~70% correlated to the BoC Overnight Rate since 2000, implying limited downside potential to rates while the BoC starts its rate cutting cycle starting mid 2024

- RBC Economics expects the BoC to begin rate cuts in mid 2024, although market pricing for rate cuts has been pushed forward to early Q2
 - RBC doesn't anticipate the curve re-steepening until we are well into the cutting cycle
- Weakening output and the gradually cooling labour market reaffirmed investor expectations that the BoC has no need to further hike rates, although future economic data will guide upcoming rate decisions
- Away from BoC policy, term yields are also driven by macro expectations, namely forward expectations for CPI and GDP
- Issuers are encouraged to capitalize on windows of stability to de-risk issuance needs, with underlying rate volatility expected to remain prevalent in the near and medium term

GoC Yields at "New Normal" Levels?(1)

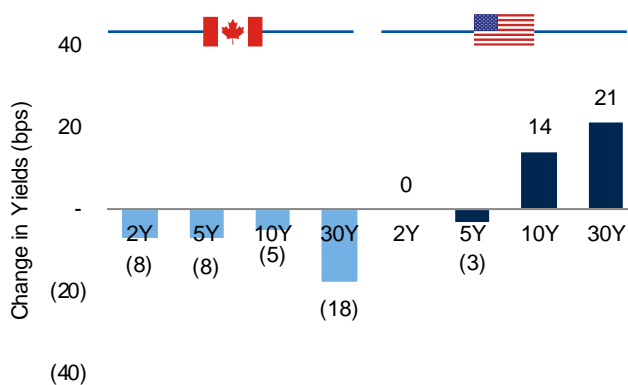


High historical correlation between term rates and the BoC Overnight Rate infers that "higher for longer" approach implemented by the Bank presents limited downside potential for yields in the next 12 months

RBC Government of Canada Rates Forecast (%)						
	Current	Q4/23	Q1/24	Q2/24	Q3/24	Q4/24
BoC Overnight Rate	5.00	5.00	5.00	4.75	4.50	4.00
5-Year GoC	3.34	3.65	3.60	3.40	3.35	3.30
10-Year GoC	3.25	3.55	3.65	3.50	3.40	3.35
30-Year GoC	3.09	3.40	3.65	3.60	3.60	3.55

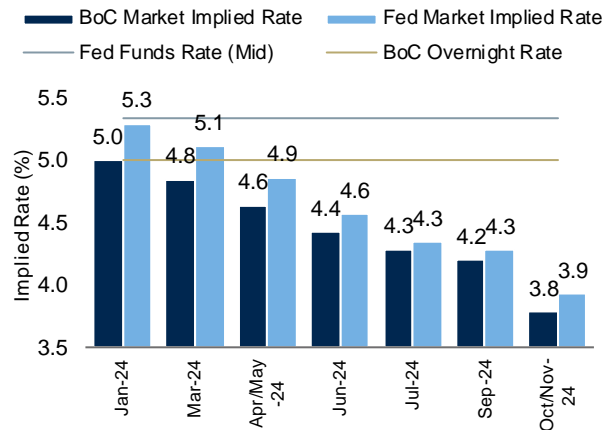
RBC US Treasury Rates Forecast (%)						
	Current	Q4/23	Q1/24	Q2/24	Q3/24	Q4/24
Fed Funds (Mid)	5.38	5.38	5.38	5.13	4.63	4.13
5-Year UST	3.97	4.35	4.20	3.85	3.65	3.50
10-Year UST	4.02	4.30	4.40	4.20	4.05	3.95
30-Year UST	4.18	4.40	4.50	4.35	4.30	4.25

2023 Change in Rates(3)



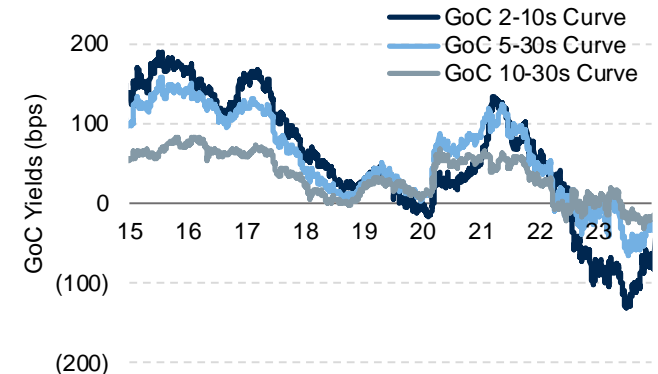
After increasing 90-100+ bps earlier in the year, GoC yields rallied meaningfully in Q4

Market Rate Expectations(3)



Markets are pricing in cuts in both Canada and the US in Q1 2024

Yield Curve Dynamics(3)



GoC yield curve expected to remain inverted until cutting cycle is underway

32 (1) RBC Forecast from Financial Markets Monthly Report as of December 12, 2023; current rates as of December 13, 2023

(2) Correlation with the BoC Overnight Rate from 2000 to present

(3) Source: Bloomberg

Canadian Public Sector Market Update

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