



Capital  
Markets

# 2023 Canadian Public Sector Issuers Roundtable Series

DECEMBER 2023

## TABLE OF CONTENTS

03		Forward
04		<b>Public Sector Roundtable</b>
05		Panelists & Moderators
07		Public Sector Key Themes
08		Economic Outlook & Forecast
11		Interest Rates & Housing Market
14		ESG Program
17		Domestic Issuance
22		Offshore Markets
25		<b>SSA Roundtable</b>
26		Panelists & Moderators
27		SSA Key Themes
28		Funding Requirements
30		ESG program & Thematic Bonds
35		Maple SSA & the Canadian Market
41		<b>Municipal Treasurers Roundtable</b>
42		Panelists & Moderators
43		Municipal Treasurers Key Themes
44		Municipal Financial & Economic Update
47		Municipal Borrowing Programs & Federal Policy
54		ESG and Sustainable Finance Initiatives
58		Select Canadian Public Sector Borrowing Programs – 2023
60		Select Canadian Municipal Issuers
61		Select RBC-Led Transactions in 2023

## FORWARD

RBC Capital Markets Government Finance team was pleased to facilitate the annual Canadian Public Sector Debt Issuance roundtable event in late 2023. Participants included representatives from the Canadian Federal Government, Federal Agencies, Provincial issuers, Pension Asset Managers/Pension Funds, Municipal issuers, offshore SSA Maple issuers, and institutional investors. The discussions focused on the current economic environment in Canada, trends in borrowing by public sector issuers, trends in investing by institutional investors, and expectations for 2024. This publication summarizes these conversations along with key insights and takeaways from issuers and investors in the Canadian public sector. We thank all the participants who dedicated the time to share their views and experiences.

Canadian public sector issuers completed C\$212.3 billion of funding across all currencies in 2023, up from the C\$189.7 billion seen in 2022 (+11.9%). 70.7% of the Public Sector issuance was completed in the domestic market in 2023, representing a 10.0% increase YoY. More specifically, the Canadian provinces completed C\$93.0 billion in 2023 across all currencies, up 14.1% from the C\$81.5 billion seen in 2022. The majority (80.0%) of the issuance by the Canadian provinces were completed in the domestic market, in line with historical trends. In addition to increased Provincial borrowing, the Canadian SSA sector had a record year – the sector saw C\$55.1 billion equivalent of supply across all currencies (+16% vs. 2022) as the pension asset manager/pension fund sector further increased their presence in the domestic market. This sector continues to grow with existing participants like CPPIB, PSP, and CADEPO increasing their borrowing programs; as well as new entrants such as BCI, who issued their inaugural C\$1.25 billion 10-year offering. Canada Housing Trust was also a focal point of the Public Sector Market as their funding limit was increased to C\$45.0 billion in 2023 from C\$40.0 billion. It was also announced in the Federal Fall Economic Update that the Canada Mortgage Bond (CMB) Program would be expanded to up to C\$60.0 billion in 2024, and that the Federal Government would purchase up to C\$30.0 billion of new issue CMB beginning in 2024.

International funding from Canadian SSA issuers remained strong at C\$43.7 billion equiv. or 72.0% of its funding in offshore markets, while provincial issuers completed C\$18.6 billion equiv. (20.0%) outside of Canada, for aggregate offshore public sector supply of C\$62.3 billion equiv. Canadian public sector issuers continued to display currency diversity with offerings completed across AUD, EUR, GBP, NOK, USD and other currencies.

ESG issuance remained highly topical in the domestic market for public sector issuers with C\$15.9 billion from provincial, SSA and municipal issuers across Green, Social, Health, Gender, and Sustainable Bond offerings. The Government of Canada did not issue in the ESG space in 2023. Canada however did update its Framework to include nuclear as a use of proceeds and is committed to being a regular issuer in the domestic green bond market. SSA Maple issuers accounted for C\$8.6 billion of 2023 ESG supply, provincial issuers accounted for C\$3.6 billion. Pension Asset Managers/Pension Funds remain active with C\$2.0 billion of supply, while Municipal issuers also completed C\$1.7 billion.

On the strength of a leading advisory and execution platform and with the strong partnership with clients, RBC finished the year #1 in the Canadian league tables across all major third party providers, including a #1 position in the Corporate tables and a #1 position in the Government Finance tables (excluding Quebec) – representing the 25th consecutive year RBC has ranked #1 in the Canadian market league tables.

Looking ahead to 2024, we expect the volume of issuance by Canadian public sector issuers to be at a modestly higher level to the volume seen in 2023 given that provinces are expected to increase borrowing to address higher fiscal deficit and capital spending needs, combined with the expansion of the CMB program to C\$60.0 million, and expectations of continued growth in the borrowing programs for the pension asset manager/pension fund sector. We are optimistic that the funding environment will continue to remain constructive, notwithstanding expectations of ongoing rate volatility and external events that will affect markets.

In these times of heightened volatility and uncertainty in financial markets, issuers will undoubtedly continue to require sound and trusted advice, and as the leader in the Canadian debt capital markets, RBC looks forward to continuing to leverage our platform and insights in supporting issuers in achieving their funding objectives through advice and best execution. We look forward to continuing to partner and support you in the upcoming year. Thank you for your confidence in RBC and wish you continued success in the year ahead.



Alex Caridia  
Managing Director, Head of Global Public Sector Markets  
Debt Capital Markets  
RBC Capital Markets

# Public Sector Roundtable



## ISSUER REPRESENTATIVES



**Amaro Cosme**  
Senior Director, Funding  
management and Investor  
relations, Treasury (CDPQ)



**Andrew Bastien**  
Senior Director, Liquidity  
& Funding, PSP Investments  
(PSP)



**Carlos Yep**  
Director, Funding, Ontario  
Finance Authority (Ontario)



**Catherine Rothrock**  
Chief Economist, Alberta  
Treasury Board and Finance  
(Alberta)



**Chadrick Buffel**  
Principal Portfolio Manager,  
Export Development Canada  
(EDC)



**Dave Ayre**  
Treasurer, Canada Mortgage  
and Housing Corp. (CMHC)



**Natalie Steshenko**  
Senior Associate, Exposure,  
Leverage and Liquidity  
Management (CPPIB)



**Nicolas Moreau**  
Associate Assistant Deputy  
Minister, Financial Sector  
Policy Branch, (Department  
of Finance, Canada)



**Nicoleta Oprea**  
Assistant Deputy Minister,  
Manitoba Finance, Treasury  
Division (Manitoba)



**Sam Myers**  
Executive Director, Debt  
Management Branch  
(British Columbia)



**Stephen Thompson**  
Executive Director, Capital  
Markets, Treasury Board and  
Finance, Province of Alberta  
(Alberta)



**Tammi Keith**  
Director, Capital Markets  
(Saskatchewan)

## INVESTOR REPRESENTATIVES



**Abid Dobani**  
Managing Director, Head  
Portfolio Management, Execution  
and Strategy, RBC Corporate  
Treasury (RBC Treasury)



**Matthew Cassell**  
Portfolio Manager,  
Healthcare of Ontario  
Pension Plan (HOOPP)



**Ryan Goulding**  
Principal, Portfolio Manager,  
Leith Wheeler

## MODERATORS



**Alex Caridia**  
Managing Director, Head of  
Global Public Sector, RBC  
Debt Capital Markets



**Jason Daw**  
Managing Director,  
Head of North America  
Rates Strategy



**Jigme Shingsar**  
Managing Director  
RBC Debt Capital Markets



**Kevin Martin**  
Director, RBC Government  
Finance

## PUBLIC SECTOR KEY THEMES

1

**Economic Growth Expected to Slow:** The combination of high rates and household leverage is having the expected effect of depressing economic activity. The question is about the degree of weakness, not the direction of travel; a spontaneous growth rebound is highly unlikely until there is a catalyst (i.e. easing financial conditions or a positive fiscal impulse). RBC growth forecasts assume a shallow recession and below trend growth persisting through 2024. Risks are skewed to a hard landing which could involve either: (i) an unforeseen shock related to crisis/liquidity or (ii) a classic deep growth recession from underestimating the impact of tighter policy on rate sensitive sectors.

2

**Inflation:** Inflation should moderate gradually alongside slack in the product and labour markets, but there are question marks on how quickly this will occur. If the Bank of Canada is correct and the economy is entering excess supply, coupled with further loosening in labour market conditions, downward forces on inflation should become more acute and push towards the Bank's target zone. RBC Economics expects headline inflation to reach 1.5% by end of 2024 and core inflation to subside toward the BoC 2% target. The risk scenario is slanted to prices remaining elevated. Current wage trends are inconsistent with inflation reaching target. Similarly, corporate pricing behavior and inflation expectations continue to be higher than normal. These combine to give a higher risk that elevated inflation becomes embedded.

3

**Bank of Canada starts cutting rates in 2024:** The RBC Rates Strategy team's base case for monetary policy in Canada projects 100bp of interest rate cuts in 2024 starting in late Q2, followed by another 100bp in 2025. The memory effect of a policy error (tightening too late) combined with sticky inflation/wages should see the BoC hold off longer than in past cycles. With core inflation measures still stubbornly high, the BoC should remain on hold for a while.

4

**Housing Market Challenges:** The housing market is caught between opposing cyclical and structural forces. The cyclical impact from higher rates is decidedly negative: (i) housing affordability is problematic, (ii) debt servicing ratios will rise from lofty levels, and (iii) ongoing mortgage resets. However, the structural forces – immigration, land supply, housing shortage, insufficient multi-dwelling units – prevent a larger downturn. The outlook for housing would worsen if job losses became more widespread than the base case scenario. A prolonged period of stagnation in housing activity/prices is most likely.

5

**Steady ESG Issuance with Increased Investor Focus:** Canadian public sector ESG issuance volumes retraced to ~C\$16.0 billion in 2023 after reaching a record high of C\$22.7 billion in 2022. The Government of Canada did not issue in the ESG space in 2023. Canada however did update its Framework to include nuclear as a use of proceeds and is committed to being a regular issuer in the domestic green bond market. Public Sector ESG issuances represent the majority of total ESG issuance in CAD, consisting of 65% of the total CAD ESG issues. Provinces who have not yet issued an ESG bond emphasized that they would like to eventually embed ESG into all their programs, aiming to champion ESG with a holistic approach and not just for specific issuances that they complete. Issuers are also focused on the liquidity of the ESG bonds, with consideration of offshore ESG issuances if their program is large enough to be able to show commitment in those specific markets.

6

**Overall Issuance Levels Expected to Grow in 2024:** Issuance from Canadian Public Sector issuers totaled ~C\$212.3 billion across all currencies in 2023, up 11.9% from the C\$189.7 billion completed in 2022. C\$150.0 billion (70.7%) of Public Sector Issuance was completed in the domestic market in 2023, a 10.0% increase from the C\$136.5 billion (72.0% of total funding) in 2022. Provincial issuers completed C\$93.0 billion in 2023 across all currencies, an increase of 14.1% from the C\$81.5 billion seen in 2022 with the majority (80%) completed in the domestic market, in line with historical trends. The outlook for debt issuance by the Canadian public sector in 2024 is expected to be at a modestly higher level to the volume seen in 2023 given: (i) provinces are expected to increase borrowing to address higher fiscal deficit and capital spending needs; (ii) the expansion of the Canada Mortgage Bond (CMB) program to C\$60.0 billion in 2024; and (iii) expectations of continued growth in the borrowing programs for the pension asset manager/pension fund sector.

7

**Heightened Risk of a Weakening of Credit Spreads in 2024:** The prospect of increased issuance levels combined with a scenario where economic growth deteriorates and/or there is some type of risk-off event in financial markets tilts the balance of risks towards the potential for a weakening of credit spreads in 2024. Conversely, an economic soft-landing scenario combined with stable and positive tone in credit markets would be expected to be supportive for spread product in the year ahead.

8

**International Markets Expected to Remain a Key Component of Financing:** Offshore issuance was up 17% year-over-year in 2023 with the Canadian SSA sector (incl. GoC) completing C\$43.7 billion equiv. or 72% of its funding in offshore markets, while provincial issuers completed C\$18.6 billion equiv. (20%) outside of Canada, for aggregate offshore public sector supply of C\$62.3 billion equiv. Provincial issuers noted that they are still committed to issuing in core international markets (USD/EUR/GBP) to diversify their funding base and will continue to actively monitor relative financing levels for offshore issuance opportunities in 2024. Pension Fund/Pension Asset Manager issuers also remain committed to finding strong execution opportunities in offshore markets like USD, EUR and AUD in 2024.

## ECONOMIC OUTLOOK & FORECAST

**Alex Caridia (RBC):** First of all, thank you everyone for making the trip here to join us in person. As always, the roundtable is an opportunity for everybody to express your views on the market. Let's start with Jason moderating the first segment, to run through some of the macro outlook, and start with RBC's official view, and then we can go around the table and ask you some questions. Then we'll get into some of the more issuer specific questions which I will help to moderate. Over to you, Jason.

**“Having contractions as far as GDP in Canada and the US printing on the stronger side, it's only happened a couple times in history, before this one was in 2015 when oil prices fell a lot.”**

*Jason Daw, RBC Rates Strategy*

**Jason Daw (RBC Rates Strategy):** Thanks everybody for joining. A lot of familiar faces and some new ones, so it's great to see everybody again. First on the growth side, obviously there's been lots of surprises this year. I think we went from a situation where people thought Canada and the US could be very resilient. Now we've seen a divergence between what's happening in Canada, and what's happening in the US. This is generally not how the cycle plays out. Having contractions as far as GDP in Canada and the US printing on the stronger side, it's only happened a couple times in history, before this one was in 2015 when oil prices fell a lot. The second one was in the early 1990s leading up to the recession, where Canada growth was weaker than the US and then both went into a deep recession. So, we don't think there's going to be a delinking in the cycles. We think it's just a matter of the transmission from monetary policy into the economy, which is obviously quicker in Canada given household leverage and mortgage rates; the US is going to catch up next year. Ultimately, growth in both economies will be very sluggish in 2024 with little prospect of a rebound until monetary policy is materially eased. The difficulty that we're facing as far as forecasting interest rates in Canada, is that in a normal cycle when the unemployment rate has already gone up as much as it has and when growth has been this weak, we would've already been seeing rate cuts at this point. Markets are currently accelerating the timeline of when policy easing will happen. But we think central banks are going to be more patient, and they're going to want to make sure they squeeze out everything they can from inflation and are on the side of getting to a situation where they undershoot the inflation target rather than overshooting it. So, it does complicate some of the cyclical dynamics, but overall with a weak growth profile in 2024, inflationary pressures easing and the next move (with uncertain timing) before rate cuts, does favour bond yields falling. With that, for the provinces, how do each of you view the economic or fiscal outlook? Obviously, there's differences across provinces, commodity vs non-

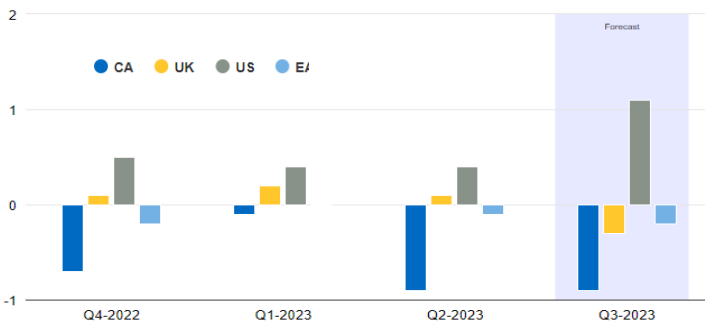
commodity oriented, large vs small housing risks, etc., but for the fiscal outlook - what are you thinking for growth next year? We'll start with Alberta, which is an interesting case, oil prices were very strong, they've come down a lot now. Is anything changing?

**Stephen Thompson (Alberta):** As Alberta contributes disproportionately to the federation, we're going to contribute disproportionately to the round table. I'm going to ask Catherine Rothrock, our chief economist to take that one if she doesn't mind.

**Catherine Rothrock (Alberta):** I'll be perfectly frank, we think that the private sectors are underestimating growth next year for Alberta, so we've got around 2.6% - a little bit weaker than where we're at for the budget, and that does reflect some of the impact of weaker consumer spending and some of that narrative that's out there. But I would say where other folks might not be paying a lot of attention is that we do expect a lot of investment coming into the province. We've got a lot on the go right now on the investment side. We've got a big announcement from Dow last week, an \$8 to

### GDP GROWTH TRENDS DIVERGING BETWEEN ECONOMIC REGIONS

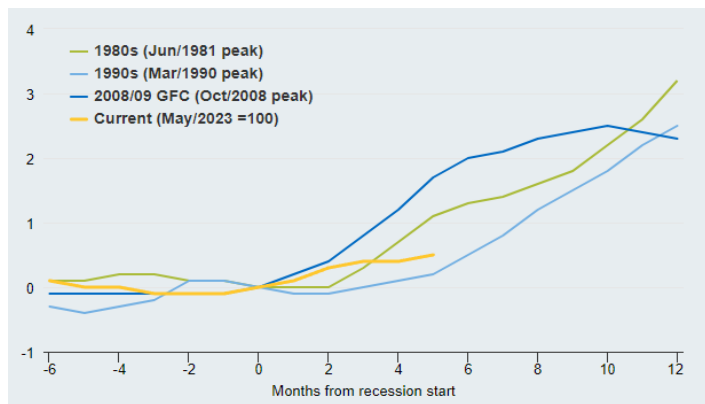
%, quarterly growth in per-capita GDP



Source: Haver, RBC Economics | \*Estimates for UK and the EA are based on working age pop.

### CANADA UNEMPLOYMENT RATE RECESSION COMPARISON

PPT increase, 3-month rolling average



Source: Statistics Canada, RBC Economics

9 billion investment Net-Zero Ethylene Cracker. We've got a lot of activity outside of oil and gas that's contributing to growth next year. I think we've taken a balanced approach in terms of our outlook for oil prices, we're looking at between \$70 to \$75/bbl over the medium term. Our expectation is that prices are going to soften of course with a lot of volatility. Even our projections this year have moved around quite a bit. So, we are at \$79/bbl, we pulled it back and moved it up again, which I don't like to do, but that's just a reality right now. Our employment, our labour market has done really well so far this year. We do expect some softness of course, but certainly we expect to outpace other provinces by a fair margin next year. That's the trend with some acknowledgement that consumer spending is going to be weak. Our housing market has performed well. We have some catching up to do on the supply side, so we're finally starting to see activity there. Overall, we're optimistic for next year given some of the risks out there.

**“Our expectation is that prices are going to soften of course with a lot of volatility.”**

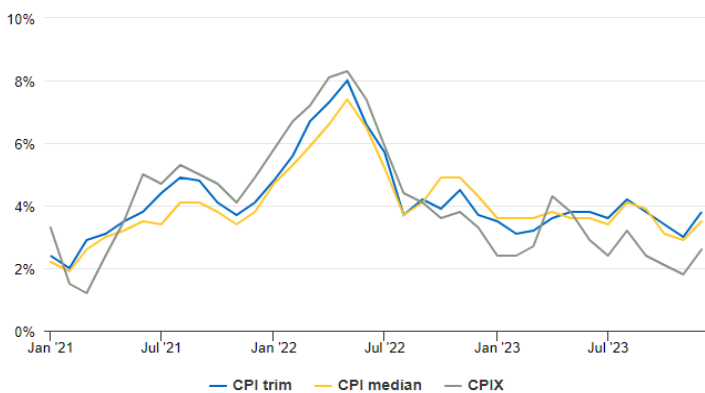
*Catherine Rothrock, Alberta*

**Jason Daw (RBC Rates Strategy):** I guess maybe contrasting that with a non-commodity-oriented Province such as Ontario, Carlos, anything on your side?

**Carlos Yep (Ontario):** We're ending 2023 with real GDP at 3.7% and we're estimating 1.1% for this coming year, then slowing down to 0.5%. We're looking at real GDP to gradually coming back up. In 2022, we saw growth in employment, but of course it has slowed down in 2023. The slower growth in the economy and the tight monetary policy has been contributing to some of the inflation and it's uncertain the path of inflation going forward.

**GROWTH IN THE BOC'S PREFERRED CORE MEASURES BOUNCED HIGHER**

%, annualized 3-month growth, seasonally adjusted



Source: Statistics Canada, RBC Economics

**“The slower growth in the economy and the tight monetary policy has been contributing to some of the inflation and it's uncertain the path of inflation going forward.”**

*Carlos Yep, Ontario*

**Jason Daw (RBC Rates Strategy):** Linking in the economic outlook, differences in revenues and expenses, how does it affect anybody's funding plans? Maybe we can start with Sam from BC.

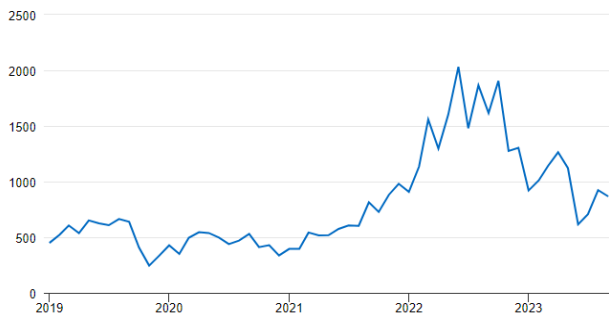
**Sam Myers (British Columbia):** One of the things that we observed just recently between the first quarterly update and the second quarterly update is natural gas prices and the effect on revenues. There's been a significant change. Going back to the February 2023 budget, we had forecast C\$2 billion for natural gas revenues. However, we've had to revise this down by probably about a half to two thirds. It is one of the important line items, but it only will comprise between 5-10% of total government revenue. Spending wise, you've heard of some of the challenges that we've had with wildfires that has moved the needle in a considerable way. Some of the spending was part of the February 2023 budget. But unlike natural disasters such as flooding, there is no dollar-for-dollar reimbursement payments from the federal government. There's only a portion of the wildfire spending that will come from Ottawa. We announced in the second quarterly update between C\$300-360 million that was coming from Ottawa in relation to that. The debt forecast is projected to be C\$6 billion lower compared to budget 2023. As far as the funding plan is concerned, we've had to borrow due to a projected deficit. The deficit is moderately smaller by about C\$1 billion as we reported in the second quarterly update a deficit forecast of C\$5.5 billion. We've had a busy year on our funding plan and will be happy to chat more about that once we turn our attention to that topic.

**Jason Daw (RBC Rates Strategy):** I guess on the revenue and expense side, sticking with the commodity theme – Saskatchewan, any impacts there from the commodity price angle and what are you expecting?

**Tammi Keith (Saskatchewan):** Saskatchewan has a diversified economy. It's resource-based with mining, including potash and uranium, and oil and gas comprising 26% of our real GDP. Agriculture is 8% of our real GDP. Swings in commodity prices affect our revenue experience. However, each commodity has its own cycle, and the cycles are not highly correlated. This year, potash prices fell, and as reported in our Q2 results, the C\$700 million decline in non-renewable resource revenue was largely due to lower potash prices and volumes. This decline was partially offset by an increase in oil revenues due to higher prices and an improved differential. Drought in Saskatchewan, primarily in the southwest part of the province,

## SASKATCHEWAN POTASH PRODUCTION TRENDS DOWN TOWARD PRE-PANDEMIC LEVELS

Potash production, millions of tonnes



Source: Saskatchewan Ministry of Energy and Resources, RBC Economics

created an increased expense of C\$800 million in crop insurance payouts. These resource-based items directly impact our fiscal situation, contributing to the shift in a projected surplus of nearly C\$1 billion to a deficit of C\$250 million. Saskatchewan needs to borrow about C\$700 million more this year than projected.

**“Each commodity has its own cycle, and the cycles are not highly correlated.”**

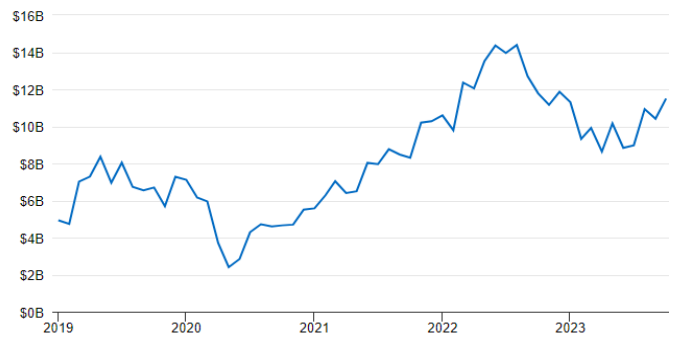
*Tammi Keith, Saskatchewan*

**Jason Daw (RBC Rates Strategy):** On the oil price side, RBC as a firm has been bullish on oil. I think it’s hard to catch these turning points. But in my opinion, there’s probably more downside risk to global economic activity than what markets are expecting at this point. I think oil could probably go down quite significantly even from the levels that we’re at now. To me, it’s more about timing of when growth starts to slow versus if it will slow, but that’s again my opinion. What happens if oil went to \$40/bbl? I guess Alberta, what does that mean? Do you have to issue more at some point if oil is at \$40/bbl?

**Stephen Thompson (Alberta):** If oil prices hover at \$40 it’s quite manageable for us and quite manageable for the industry. Our royalty take per barrel is non-linear and it’s meant to cushion industry in times when we do have a downturn. So, if you think back to 2014, as oil fell below about \$30 or \$25/bbl, the province took virtually nothing in terms of royalty revenues. If you look at the budget this year, non-renewable resource revenue is about 25% of the budget. It’s about \$20 billion on a \$75 billion budget, which is virtually wiped out in a downturn like that. The thing with Alberta is we’ve put in a fiscal framework in the latest budget that requires balanced budget but allows for deficits in such a situation. What we would be relying on in a circumstance like that is our unfettered access to capital markets. I mean our debt to GDP right now is 9% headed for 7% in our budget forecast. So, we have capacity

## VALUE OF ALBERTA OIL AND GAS EXPORTS RECOVERING

Alberta exports: oil and gas extraction, billions of Canadian dollars



Source: Innovation, Science, and Economic Development Canada, RBC Economics

there to correct if something like that happens or to wait it out, not necessarily to correct, but we point at a significant downturn protracted period without really impacting our balance sheet over the long term.

**Jason Daw (RBC Rates Strategy):** Thanks Stephen. On the investor side, either Abid or Matt or Ryan, how does the exposure to resource sectors across provinces affect your decisions on what you’re possibly buying or not?

**Matthew Cassell (HOOPP):** There has been a significant compression of relative spreads in the CAD HQLA market over the last 10-years. The volatility in inter-provincial basis has seen a marked decrease through this. The resource linked provinces provide a nice way/low beta mechanism to generate incremental value add as you still get some movement in the basis to Ontario in these credits that is driven by fundamentals/resource economics. This compares to some of the non-resource credits that tend to be much more of a liquidity story in how their basis moves. This is harder to play. Near term issuance needs and flows from other accounts have an outsized influence on non-resource credits, but if you’re talking about something like Newfoundland or Alberta, you have some sort of leverage to oil or something that you can make an informed investment decision based on.

**“The resource linked provinces provide a nice way/low beta mechanism to generate incremental value add as you still get some movement in the basis to Ontario in these credits that is driven by fundamentals/resource economics.”**

*Matthew Cassell, HOOPP*

## INTEREST RATES & HOUSING MARKET

**Jason Daw (RBC Rates Strategy):** Well said Matt. Moving on to the topic of interest rates. Our baseline forecast is the Bank of Canada will start cutting in Q2 2024. If you had to narrow it down to a month, it's probably more likely June than earlier in the quarter. The market has swung quite dramatically from expecting rate hikes six weeks ago to now expecting rate cuts as early as March. We think that's a little bit too early unless you get to more of a downside growth scenario versus what we're thinking at this point. I think the challenging thing right now is that there's a lot priced in, the curve's been inverted, so how much farther can the long end come down if you're getting a policy rate that's only possibly getting down to 3%, assuming nothing bad happens in the world, there's no liquidity crisis event that requires central banks to go out of neutral territory. I do think the Bank of Canada and the Fed are going to be cautious about going into neutral territory, or even below neutral territory given the problems that we've had with inflation over the past couple of years. I think if we only get down to a 3% policy rate, a 10-year bond yield below 3% becomes a little bit challenging. Maybe the long end of the curve has factored in a lot right now. Currently, the front end of the curve – 2s and 5s - still has quite a bit of room to move down, in that context, is the cost of funding and servicing debt, impacting fiscal flexibility in any way? In general, government debt levels are low, but how does it affect your decisions, flexibility, and the way that you approach your funding?

“So how much farther can the long end come down if you're getting a policy rate that's only possibly getting down to 3%.”

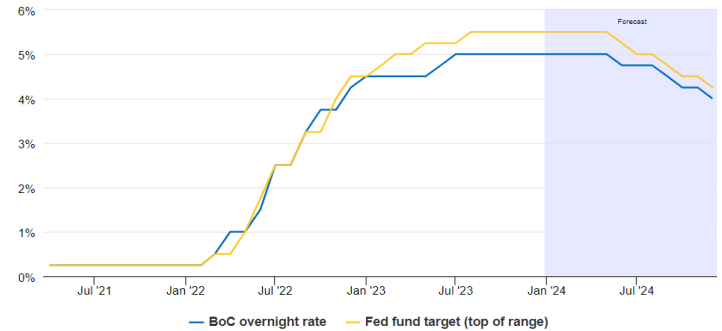
*Jason Daw, RBC Rates Strategy*

**Nicolas Moreau (Department of Finance, Canada):** Public debt charges have risen this year, reflecting higher interest rates. We anticipate that public debt charges will reach C\$46.5 billion or 1.6 per to GDP in 2023-24, up from C\$35 billion or 1.2% to GDP in 2022/23. Despite the recent uptick in debt charges, the ratio of debt charges to GDP still lies well below the historical average of the past 40 years.

The relatively modest ratio of debt charges to GDP indicates that, despite the recent surge in interest rates, debt charges remain at a reasonable level and Canada's capacity to service the debt remains robust.

Canada's net debt as a share of the economy is still lower today than in any other G7 country prior to the pandemic—an advantage that Canada is forecasted to maintain. Canada's economic plan has also delivered the fastest fiscal consolidation in the G7 since the depths

### CENTRAL BANKS TO EASE OFF THE BRAKES IN 2024



Source: Haver, RBC Economics

### FINANCIAL MARKET FORECASTS

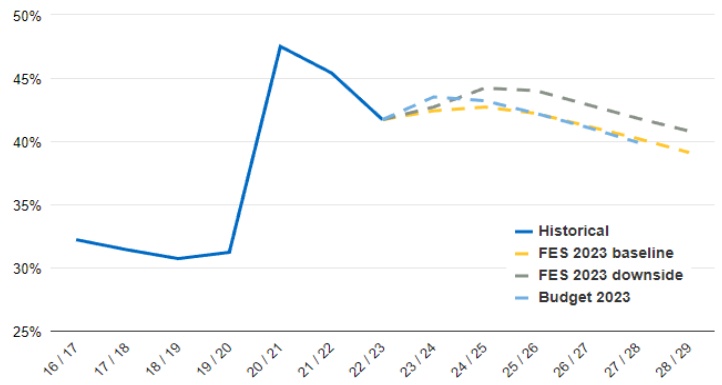
Interest rates (% , end of quarter) – December 2023

	Forecast										Forecast					
	23Q1	23Q2	23Q3	23Q4	24Q1	24Q2	24Q3	24Q4	25Q1	25Q2	25Q3	25Q4	2022	2023F	2024F	2025F
<b>Canada</b>																
Overnight	4.50	4.75	5.00	5.00	5.00	4.75	4.50	4.00	3.50	3.00	3.00	3.00	4.25	5.00	4.00	3.00
Three-month	4.34	4.90	5.07	5.00	4.95	4.85	4.35	3.85	3.35	3.00	3.00	3.00	4.23	5.00	3.85	3.00
Two-year	3.74	4.58	4.87	4.30	4.20	3.85	3.60	3.40	3.30	3.20	3.10	3.10	4.06	4.30	3.40	3.10
Five-year	3.02	3.68	4.25	3.65	3.60	3.40	3.35	3.30	3.30	3.25	3.20	3.20	3.41	3.65	3.30	3.20
10-year	2.90	3.26	4.03	3.55	3.65	3.50	3.40	3.35	3.35	3.30	3.30	3.30	3.30	3.55	3.35	3.30
30-year	3.02	3.09	3.81	3.40	3.65	3.60	3.60	3.55	3.50	3.45	3.40	3.40	3.28	3.40	3.55	3.40
Yield curve (10s-2s)	-84	-132	-84	-75	-55	-35	-20	-5	5	10	20	20	-76	-75	-5	20.00
<b>United States</b>																
Fed funds*	4.88	5.13	5.38	5.38	5.38	5.13	4.63	4.13	3.88	3.63	3.38	3.38	4.38	5.38	4.13	3.38
Three-month	4.85	5.43	5.55	5.30	5.28	4.98	4.48	3.98	3.75	3.55	3.30	3.30	4.42	5.30	3.98	3.30
Two-year	4.06	4.87	5.03	4.80	4.55	4.05	3.70	3.40	3.20	3.10	3.12	3.16	4.41	4.80	3.40	3.16
Five-year	3.60	4.13	4.60	4.35	4.20	3.85	3.65	3.50	3.40	3.35	3.36	3.39	3.99	4.35	3.50	3.39
10-year	3.48	3.81	4.59	4.30	4.40	4.20	4.05	3.95	3.90	3.85	3.80	3.85	3.88	4.30	3.95	3.85
30-year	3.67	3.85	4.73	4.40	4.50	4.35	4.30	4.25	4.20	4.15	4.10	4.15	3.97	4.40	4.25	4.15
Yield curve (10s-2s)	-58	-106	-44	-50	-15	15	35	55	70	75	68	69	-53	-50	55	69
<b>Yield spreads</b>																
Three-month T-bills	-0.51	-0.53	-0.48	-0.30	-0.33	-0.13	-0.13	-0.13	-0.40	-0.55	-0.30	-0.30	-0.19	-0.30	-0.13	-0.30
Two-year	-0.32	-0.29	-0.16	-0.50	-0.35	-0.20	-0.10	0.00	0.10	0.10	-0.02	-0.06	-0.35	-0.50	0.00	-0.06
Five-year	-0.58	-0.45	-0.35	-0.70	-0.60	-0.45	-0.30	-0.20	-0.10	-0.10	-0.16	-0.19	-0.58	-0.70	-0.20	-0.19
10-year	-0.58	-0.55	-0.56	-0.75	-0.75	-0.70	-0.65	-0.60	-0.55	-0.55	-0.50	-0.55	-0.58	-0.75	-0.60	-0.55
30-year	-0.65	-0.76	-0.92	-1.00	-0.85	-0.75	-0.70	-0.70	-0.70	-0.70	-0.70	-0.75	-0.69	-1.00	-0.70	-0.75

Note: Interest Rates are end of period rates. \* Midpoint of 25 basis point range

### NEAR-TERM FISCAL RESTRAINT BRINGS DOWN DEBT-TO-GDP PROJECTIONS

Federal debt-to-GDP, %



Source: Department of Finance, RBC Economics

of the pandemic, resulting in Canada having the smallest deficit in the G7 as a share of the economy over the current and next two years.

A long tradition of fiscal responsibility continues to be a pillar of Canada's excellent credit ratings from Moody's (Aaa), S&P (AAA), and Fitch (AA+), as well as DBRS Morningstar (AAA). With Germany, Canada is one of only two G7 economies to have a AAA rating from at least two of the three major global credit rating agencies.

**Nicoleta Oprea (Manitoba):** Debt servicing costs are higher year-over-year. The challenge is on forecasting, to factor in an appropriate amount of volatility, by the time the forecast was complete, it was already stale because of the move in interest rates. Some of the higher debt servicing costs have been offset by the long cash position that the province was holding throughout the year.

**“The challenge is on forecasting, to factor in an appropriate amount of volatility, by the time the forecast was complete, it was already stale because of the move in interest rates.”**

*Nicoleta Oprea, Manitoba*

**Stephen Thompson (Alberta):** I would say for Alberta, the next thing right now is we have an option because we're running surpluses, we're paying down debt. We have virtually no sensitivity to rates right now, we're just choosing instead to refinance with cash.

**Jason Daw (RBC Rates Strategy):** On the investor side there's been a lot of volatility in markets as the narrative on the economy and monetary policy remains in flux. How have you been positioned? What are your thoughts for rates and the yield curve going forward? Instead of Matt stealing the thunder with a fantastic answer again, either Ryan or Abid?

**Ryan Goulding (Leith Wheeler):** You need to respect volatility and that really comes down to one of the hardest things we do as investors, which is trade sizing and the increased volatility, means decreasing your trade sizing, looking at the longer-term structural trades you want to have, while being able to weather the storm. We're in a structural curve steepening environment, curves take a long time to roll over and then they tend to trend for a long time in one direction. I think that you want to have a structural steepener, we've traded duration around and the duration can be choppy. I don't think we're in an environment of a move materially lower in rates until that curve can move steeper, then we can get the shift lower in rates. There are some great positive structures you can put on and then also have some convexity in your portfolio, which I think is something quite often lost on the buy side. If you can build that into

your portfolio, then when we do get that shift to structurally lower rates, convexity will kick in.

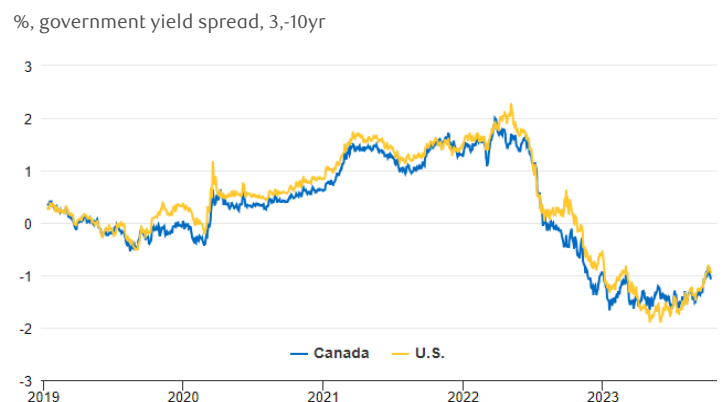
**“I don't think we're in an environment of a move materially lower in rates until that curve can move steeper, then we can get the shift lower in rates.”**

*Ryan Goulding, Leith Wheeler*

**Abid Dobani (RBC Treasury):** Speaking from a bank treasury perspective, if we think about what the collective industry learned through the Silicon Valley Bank situation, there has been a fundamental change in the way that treasuries look at any sort of asset. Historically longer duration assets were put into hold-to-collect designated portfolios. My group manages duration via an asset swap strategy generally, however some banks have historically picked up carry via naked duration. This move higher in interest rates has revised many industry participant's perspectives on what accounting classifications to use and potential changes around capitalizing losses. Liquidity portfolios exist to ensure clients can access their cash in times of stress, and we need to manage the liquidity commensurate to our demand deposit profile. Retail clients are incredibly savvy, and the market is very competitive for deposit pricing, thus our liquidity book has followed suit and structurally came further down the curve. As stimulus exits the system, we must iteratively augment our strategy to best serve our clients, and ensure our shareholders are receiving optimized value from the everchanging rate environment.

**Jason Daw (RBC Rates Strategy):** To conclude my section, EDC, what are the major themes driving your business and any notable trends in the export sector?

#### YIELD CURVES LESS INVERTED IN SEPTEMBER



Source: Haver, RBC Economics

---

“ We are focused on China. That economy is a significant factor in the overall growth of the world economy and if the real estate and bank leverage situation becomes more serious the contagion will be felt worldwide.”

*Abid Dobani, RBC Treasury*

---

**Chad Buffel (EDC):** The slowdown that we've seen with the rate hikes were felt across many sectors, certainly not only in North America but they're starting to have an effect in Europe. We're seeing a bit of a slowdown. Some of the major projects that were in the works are continuing, and certainly when you look at the green projects, they still seem to have traction into year end.

We are focused on China. That economy is a significant factor in the overall growth of the world economy and if the real estate and bank leverage situation becomes more serious the contagion will be felt worldwide. Then we could see more significant reliance on funding entities like EDC to get some projects completed. We may however see some larger problems globally which could have some projects stop investment altogether.

The Canadian government is focusing on the Indo-Pacific strategy, we're working towards that as a growth area, but we're in the infancy stage of what we're trying to do. I think right now we're seeing things steady, and a lot of that has to do with the risks that are out there and the risks that we end up assuming versus what the market will accept. I think the effect on EDC will be constant, but I think globally there're a lot of concerns on how the slowdown will affect the larger investment projects and global supply chains. On the commodities side, as growth slows down, that will affect Canadian commodities generally and our insurance business.

In terms of broader economic issues, economically we're not predicting any recessions yet on the North America side, but with growth of around 1%, it's still weak. Because it's a backward-looking statistic we won't know it's happening until it's already in progress. The Canadian consumer debt ratio to income, may ultimately be a significant factor in pushing Canada closer to a recession or a more protracted recovery than in previous times. Considering this when we also have higher levels of business bankruptcies, we are predicting higher bankruptcies levels than we have seen since 2008. These are effects for 2024, so there's risk of a significant slowdown and the key is how quickly the central banks react to what they see.

**Jason Daw (RBC Rates Strategy):** The housing market is obviously one of my more favorite topics when I go see clients around the world. It is the one thing I get asked about more than anything. There's very positive structural factors, and very negative cyclical factors. Dave, what's your view on the housing market and especially

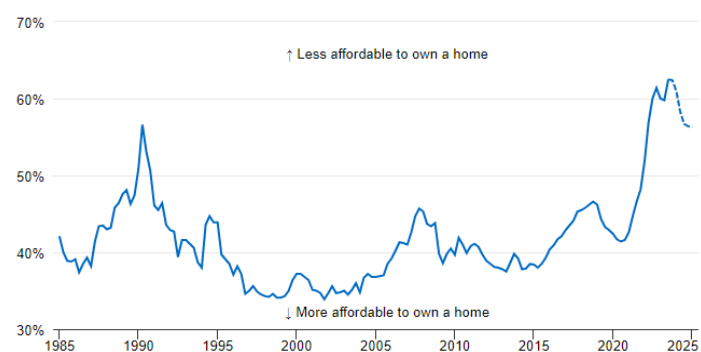
the shortfall in housing structurally that we have, and on the affordable housing side is enough being done at this point? There has been movement across different levels of government to address this, but is it sufficient to really solve the problem?

**Dave Ayre (CMHC):** Obviously everyone around this table, it doesn't matter what province or what city you're in, is experiencing housing issues right now. Housing has become unaffordable for many Canadians. As Jason noted, we do have a serious supply issue, as housing supply has certainly not kept up with demand in Canada. We have seen some downward pressure on home prices with high interest rates causing less sales activity and we see that lasting a little longer in the current economic conditions. However, as interest rates start to come down, which many are predicting to be sometime in 2024, home prices will likely start to move upwards again. This is because of the lack of housing supply or the housing supply gap, which CMHC expects at about 3.5 million units above what was already planned to be built between now and 2030, if we want to get to a reasonable level of affordability.

Ramping up new home construction is going to be a big challenge and the shortage of skilled labour is going to be a big part of that challenge. Low unemployment is good, but it also means there is a shortage of construction workers and that is certainly something that Canada needs to overcome. Addressing the productivity of the construction industry is a key priority of the Minister of Housing, Infrastructure and Communities. High interest rates will continue to make it more difficult for home builders for sure, but I think on the positive side, we saw some very good announcements in the federal government's Fall Economic Statement. Because housing is such a huge issue for the country right now, a lot of people were calling it a housing economic statement. Along with the removal of the GST from purpose-built rental construction, there were several initiatives announced. For example, the expansion of the Canada Mortgage Bond program to make more lower cost construction financing for rental housing available to homebuilders. I believe this will create some real positive movement in the space.

#### AFFORDABILITY SET TO IMPROVE MODESTLY IN THE YEAR AHEAD

Ownership costs as % of household income, Canada, composite of all housing categories



Source: RPS, Statistics Canada, Bank of Canada, RBC Economics

From CMHC, as we are the only multi-family rental housing insurer in Canada, we've seen record volumes this year on multi-family underwriting, which is very good. We're seeing new units getting created in that multi-unit rental space, a move in the right direction. CMHC is also administering the Housing Accelerator Fund on behalf of the Federal Government, it has already yielded some very good results at the municipal level. We hear a lot about the pressures of building housing, especially affordable housing, at the municipal level and I know you guys talked about it in Edmonton, but it's happening in cities everywhere. There are way too many rules around zoning, way too many fees and taxes for homebuilders, which makes it incredibly hard to get new supply online.

The idea behind the Housing Accelerator Fund is the federal government makes C\$4 billion in funding directly available to municipalities, incentivizing them to build more homes, faster. They ask the municipalities to bring forward ideas which will cut the red tape and cut down on the time and cost to build, and it's working. For example, cities can use it to modernize their permitting systems, or change their zoning rules to make it easier to build multi-family

housing across their jurisdictions, with a strong focus on creating more density, especially around public transit. As of the end of 2023, agreements had already been signed with 15 cities, including Toronto, Vancouver, Calgary and Winnipeg, and a separate deal signed with the Quebec government to cover all municipalities within their jurisdiction. It is still early days, but already we see it as a very good program and very popular with municipal governments. Obviously, there will be continued pressures on new home construction as we move forward, but there are certainly bold measures being taken to try to address it.

---

**“They ask the municipalities to bring forward ideas which will cut the red tape and cut down on the time and cost to build, and it's working.”**

*Dave Ayre, CMHC*

---

## ESG PROGRAM

---

**Alex Caridia (RBC):** Thanks Dave. I'll start with green bonds – I just got back from Asia last week and I was surprised by the level of discussion and engagement from investors around green bonds, not because they haven't historically been very focused on the topic, but it just felt like this year there's been, from where I'm sitting and maybe a little bit less discussion on the topic, we have been a little bit less focused, certainly less issuance in Canada. If you look in the US, there's been a lot of discussions around the risk of greenwashing, and we are having those discussions internally as well. So, with that in mind, I'll start with you Nic, because it's topical with the Fall Economic Statement, you talked about your new framework and hopefully we might see another green bond this year.

**Nicolas Moreau (Department of Finance, Canada):** To align Canada's Green Bond Framework with Canada's 2030 Emissions Reduction Plan, updated taxonomies, international best practices, and evolving investor preferences, the 2023 Fall Economic Statement (FES) announced the release of an updated Green Bond Framework that included some activities related to nuclear energy. Specifically: investments in new reactors; refurbishment of existing facilities; research and development; and some investments in Canada's nuclear supply chain.

The government of Canada plans to issue a green bond under the updated Framework before the end of fiscal year 2023/24, subject to market conditions.

**Alex Caridia (RBC):** What has the feedback been from the market and from investors in terms of including nuclear because it is a bit of a divisive topic?

**Nicolas Moreau (Department of Finance, Canada):** Market reactions have been very positive. The Green Bond Framework is being updated to reflect international trends and updated market expectations with respect to including nuclear energy as an eligible use of green bond proceeds.

In addition, this change is being made to recognize that nuclear energy will remain an important part of Canada's energy mix in a low carbon future and to facilitate investments that will help meet Canada's climate commitments.

---

**“This change is being made to recognize that nuclear energy will remain an important part of Canada's energy mix in a low carbon future and to facilitate investments that will help meet Canada's climate commitments.”**

*Nicolas Moreau, Department of Finance, Canada*

---

**Alex Caridia (RBC):** Great, thanks. Pivoting over to some of the pensions. Perhaps starting with CPP. What is the state of your green program as I believe you updated it as well recently.

**Natalie Steshenko (CPPIB):** We updated our framework in June 2022, and it received the highest second party opinion from CICERO, in part due to our governance but also based on the asset base that

we chose; just over 90% of our assets are pure play renewable wind and solar. Our issuance profiles the last three years has seen us issue one green benchmark per year in AUD or CAD. Given our asset pipeline I suspect our forward guidance will be similar, again limited to CAD or AUD issuance where we believe we're onboarding the largest number of ESG-only investors into the program.

**“Just over 90% of our assets are pure play renewable wind and solar.”**

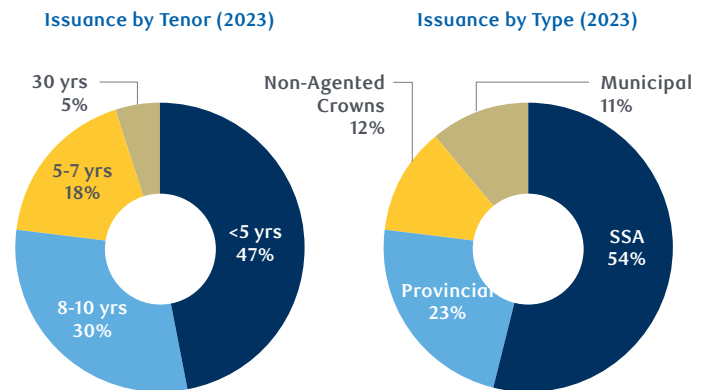
*Natalie Steshenko, CPPIB*

**Andrew Bastien (PSP):** PSP issued its first green bond early in 2022 and then the second one this year. We did a benchmark C\$1 billion 7-year green bond at the end of August, and we have not yet updated our framework since its establishment in 2022. What we've done is committed to having 10% of our debt outstanding be in sustainable bonds by 2026. That guarantees at least one benchmark issuance per year in green bonds from us going forward, and I think that will grow over time. When I look at what we're doing on the asset side and the extent to which we're integrating climate investing within the asset classes and in the portfolio construction, I believe that our green and transition assets are really going to grow over the years, and that's going to support the growth of the sustainable bond program.

**Amaro Cosme (CDPQ):** We have had a green bond framework for few years, and we have issued in both CAD and USD. Our objective is to continue to consider the green bond market for issuance opportunities. In conversations with investors this year we noticed that given the volatility in the underlying market, liquidity was a major theme; even before the label was attached. There's still strong underlying investor demand, and CDPQ's commitment to ESG remains strong. There is also a transition aspect that was added to our climate strategy in 2021. For now, we'll keep our framework green. We like the transparency aspect of the framework and the use of proceeds approach. That is not to say that in time we could consider evolving our approach to ESG issuance, but that would likely happen through another framework.

**Carlos Yep (Ontario):** We started issuing Green Bonds in 2014 using the Global Bond format to attract international green bond investors. In 2020 for our 6th Green Bond, we switched to using the Domestic and Medium Term Note (DMTN) format which allowed for intraday trade execution. We still attract a small number of international ESG investors. Investor participation changes over time depending on where assets swap and fair value levels are. Bank treasuries and asset managers continue to make up most of the investors. On December 4th, Ontario issued the 14th Green Bond using the DMTN program. We opened books and closed books within an hour and a half, and it allowed for us to issue a C\$1.5 billion green bond with a book of C\$2.3 billion. Although we are still getting pockets of demand for longer term bonds, our longest

## GREEN BOND ISSUANCE



Source: RBC Capital Markets, Bloomberg

bond issued was 9-year. Our strategy so far has been to issue in non-benchmark terms 4-years or between 6 and 9-year and to keep reopening the bond to build liquid issues. For example, our last Green Bond was an 8-year bond, a reopening of originally a 9-year bond issued in March 2023. We will look to issue another Green Bond this fiscal year and will probably reopen our most recent issue as there's only C\$3 billion outstanding even after we update to a new framework.

The current Green Bond framework is almost 10 years old, and we'll be coming out with a new sustainable framework over the near term that will allow us to issue for green, social or sustainable projects. Ontario has a large pipeline of infrastructure projects. Our next ESG issue will probably be green. ESG issuance requires a large amount of work, as we have to get staff under different provincial ministries to be able to identify suitable projects with a 6 month look-back and 12 month look-forward timeline that will need to be tracked, measured and reported on.

**“We were the first jurisdiction in North America to put a price on carbon and we moved ourselves off coal fired electricity 10 years ahead of schedule.”**

*Stephen Thompson, Alberta*

**Stephen Thompson (Alberta):** Carlos makes a great point. It's a lot of work, and with a shrinking program, we're focused on liquidity. We don't really need the diversion in terms of a use of proceeds program to add to our borrowing program in Alberta. I continue to believe that our goals are best achieved through the expenditure side of the picture- how we spend our money, not how we raise it. I'm just not going to water down the program to fund things that

we're already doing. You can't talk about emissions reduction in Canada without talking to Alberta. Frankly, any goals met in Canada have been achieved through Alberta and Saskatchewan's efforts. It's a movement born from a responsibly managed energy sector. We put emissions reductions goals in place long before the federal government weighed in on the topic. We were the first jurisdiction in North America to put a price on carbon and we moved ourselves off coal fired electricity 10 years ahead of schedule. So, all the emissions gains in Canada have come on our backs, conveniently without a green bond program, which as Carlos says is an awful lot of work.

**Alex Caridia (RBC):** Any thoughts on transition?

**Stephen Thompson (Alberta):** Transition is something that's happening on its own. We've signed on to the SMR (Small Modular Reactor) Action Plan agreement with three other provinces. That will be something topical in Alberta, but that's going to take at least 10 years to get to. We don't have any convenient hydro, it's hard for us to do wind in scale. We are working at it. We spent C\$4 billion on transition projects and renewables. We have a pause in place right now so that we can control how that market develops more than anything. We're not getting out of this space, we're getting into it in an orderly fashion rather than just taking the brakes off and having issues down the road on reclamation and remediation.

**Alex Caridia (RBC):** Moving on to a few of the provinces that haven't issued in green yet. Would any of you like to add anything?

**Sam Myers (British Columbia):** We often find that when we're engaging with the street, the question comes up - are we considering green bonds? But we continue to emphasize the overall holistic view from ESG and that it was a testament to the inaugural ESG report that we came out in the summer of 2022. There's been very constructive feedback that we've received from investors on the ESG report, and even when engaging with international investors, there doesn't seem to be any pressure or persuasion to push us towards looking at greens for any reason, with the burden and the effort that goes into establishing a program. We'll continue to report on ESG parameters on a go-forward basis although reporting won't be as comprehensive in a subsequent report, but we'll look to no doubt have an update sometime in 2024. Our hydroelectric utility BC Hydro was also an entity that has published a recent ESG report, and their power generation is certainly as clean as you can get with clean energy and renewables comprising 98% of the power. That's a good indication that they're aligned with the government's views on ESG, British Columbia will continue to focus on ESG principles by communicating through the ESG Center of Excellence that was launched as part of last year's budget. So, the answer is no, green bonds aren't really something that's going to be factoring into our medium-term plans at the very least.

---

**“BC Hydro’s power generation is certainly as clean as you can get with clean energy and renewables comprising 98% of the power.”**

*Sam Myers, British Columbia*

---

**Carlos Yep (Ontario):** A question for the others that have done international green bond issuance, what are your thoughts there? We have investors looking for Ontario Green Bonds in USD and EUR but have not issued in foreign markets primarily due to the pay-up vs issuing in the domestic market. As well, in the medium term issuing foreign market green bonds may impact on greeniums in the domestic market.

**Chad Buffel (EDC):** We examined that ourselves and we made a commitment to the Canadian market, its investors, and a commitment to US investors and we stop there. There have been demands for a EUR, SEK, AUD, and any number of currencies that we could issue a green bond in, and each would likely have reasonable success. But to your point, it's at the public issuing levels so we're not going to get any kind of additional benefit in a broader diversification of our investor base.

In terms of being able to show dedication to any of those markets, and more specifically the investors, our program is not large enough to be able to serve everybody. We must focus and because USD is our main currency, that's been our focus. We also issue in CAD as a way of helping to augment the marketplace because there still is a tremendous amount of demand. Working with Finance to manage the ESG sector is important for Canada. You can't do it all, just pick those areas that make sense and can deliver an impact.

In the ESG sector we have all been revamping our framework to respond to change, encourage transparency and align with experts. There are investors that will accept criteria at every spectrum of Green so long as there's transparency about what you're doing. I think you'll find enough of an investor base to fulfill the kinds of product that we're going to put out.

---

**“There are investors that will accept criteria at every spectrum of Green so long as there's transparency about what you're doing.”**

*Chad Buffel, EDC*

---

**Alex Caridia (RBC):** I think historically Canada has been a little bit higher in terms of greenium than say the US market for sure. But it also depends a bit on how you measure the greenium, if you measure what you could have achieved, swapping it back to your domestic curve versus where you could issue in EUR say a green bond versus a non-green bond. And you could look at that as the greenium as well. So, it depends how you measure it.

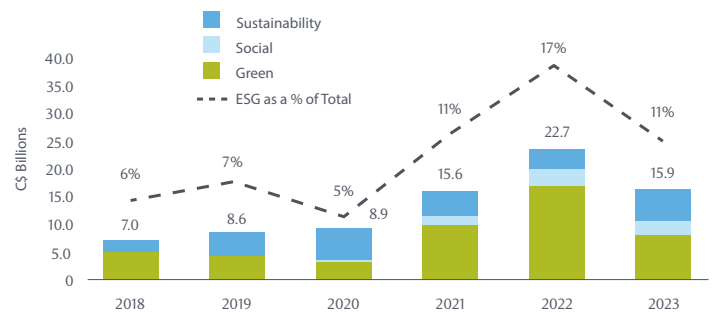
perfectly legitimate, but that's a different strategy altogether. In terms of extracting value and helping develop a market, it seems like you're getting the best bang for your buck in Canada even before you talk about relative costs. So, I think Carlos, before you even get into some of the disclosure issues, I think there's still a bit of a convergence to be had between North America and for example the EU sort of approach on taxonomy. It sounds like right now what you're doing is probably the best way to go.

**“In terms of extracting value and helping develop a market, it seems like you're getting the best bang for your buck in Canada even before you talk about relative costs.”**

*Jigme Shingsar, RBC*

**Jigme Shingsar (RBC):** I think you ultimately need to balance out where you extract some value at the margin, maybe help the market develop, which is really important as far as the domestic market goes, and where you can reasonably sustain a presence. One-offs in different markets I think then is purely opportunistic, which is

**C\$ PUBLIC SECTOR ESG-LABELLED BONDS HISTORICAL ISSUANCE VOLUME**



Source: RBC Capital Markets, Bloomberg

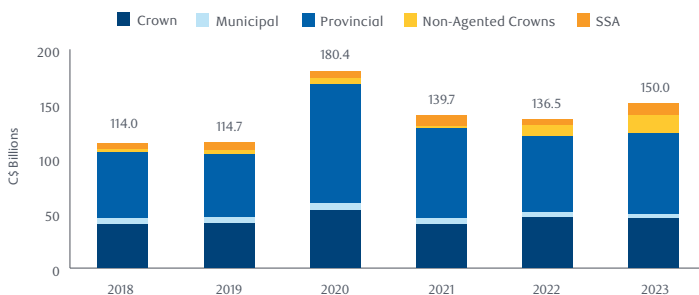
**DOMESTIC ISSUANCE**

**Alex Caridia (RBC):** I guess that's a good segway into domestic markets and I think generally we've seen more supply in CAD this year versus last year. A lot of that has been driven by the pension sector but also obviously as we've gone through the sort of reporting cycle and economic statements, deficits have generally been higher. Most of those need to be funded obviously. With the need for increased funding in mind, I wanted to check with some of the issuers here whether that's impacted the way you approach markets this year and maybe also looking forward. Tammi, do you have any comments on that?

**“We issue within any given interest rate environment, so we're agnostic to the interest rate and yield curve movements this year.”**

*Tammi Keith, Saskatchewan*

**PUBLIC SECTOR NEW ISSUE SUPPLY ( DOMESTIC ISSUANCE)**



Source: RBC Capital Markets, Bloomberg

**Tammi Keith (Saskatchewan):** We issue within any given interest rate environment, so we're agnostic to the interest rate and yield curve movements this year. We created a borrowing plan and execute within the existing parameters of the market including term relative value and investor demand. Saskatchewan's issuance allocation is 94% in CAD and 6% in international borrowing. With our lower borrowing requirement this year, our focus is the CAD market, building liquid benchmarks. Looking forward, we plan to increase our allocation to international borrowing towards 25%.

**Nicoletta Opera (Manitoba):** Yeah, the focus for us too is the domestic market. We focused on 10s and 30s, just building those liquid benchmarks, but we also look for opportunities to issue internationally to minimize our borrowing costs. This year we had the opportunity to

go to the US. We issued a US\$1 billion global, so it was very nice to be able to do that right ahead of an election, test outside of the domestic market for a bit, realize some savings there. We're going to continue to look for opportunities to issue in international markets, and the goal with the US especially is to be in that market once a year. But that is arbitrage based, so we don't have hard targets on international issuance, and that's something that we're looking at implementing right now just because we are opportunistic when we look at those markets.

**Alex Caridia (RBC):** And Natalie, your funding in CAD has increased significantly. Perhaps you can talk us through the strategy and the drivers behind that?

**Natalie Steshenko (CPPIB):** At last year's roundtable we had stated that we had issued C\$4.4 billion in the CAD market last calendar year and our goal was to grow the CAD footprint in the years to come. We were vocal that the total CAD borrowing would be up to 50% of the annual borrowing program and we achieved that goal this year by issuing C\$8.4 billion in the CAD market, which accounted 50% of our total. The growth of our CAD footprint occurred faster than expected in large part due to acceptance of the program strategy from the investor community – and we're very encouraged by this. We also met our goal of creating liquid benchmark lines of C\$3-4 billion in size, using the Canadian retention format for both new lines and taps. The CAD program is now in steady state, with our issuance profile being regular and predictable. In 2024, the outlook for CAD borrowing remains the same – being up to 50% of the program.

“The growth of our CAD footprint occurred faster than expected in large part due to acceptance of the program strategy from the investor community – and we're very encouraged by this.”

*Natalie Steshenko, CPPIB*

**Alex Caridia (RBC):** You talked about underwritten (retention format) transactions, and I guess that puts you into somewhat of a unique space in the pension sector. A question to Andrew and Amaro, do you have any plans in changing your current domestic book building style to something alike what the provinces do?

**Andrew Bastien (PSP):** We don't have plans to make any changes at the moment. Our issuance budgets this year is C\$5 billion. Next year it will probably be around C\$6 billion. I understand what CPP is doing, and I think it's working well for them, but I think it's very much a function of the size of their program and what they need to achieve domestically. Since we have C\$5 billion to issue and that's not necessarily all domestic, we have a lot of flexibility to issue wherever it makes sense from a pricing and demand perspective. would see that as something maybe we would have to look at in the future, but

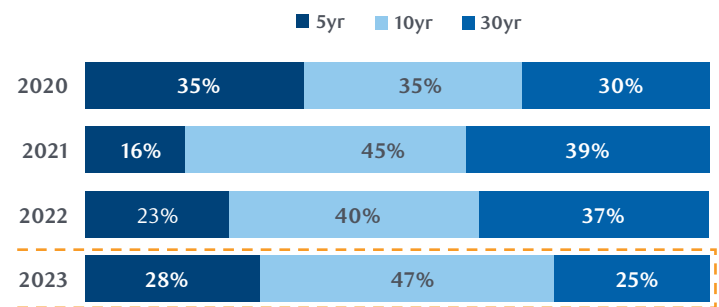
I think the way we do things right now works very well for us and I don't see any reason to change our issuance process now.

**Amaro Cosme (CDPQ):** The same for CDPQ. We started revisiting the domestic market in late 2021, we're building our presence in 5s, 7s, potentially up to 10s. This year we've reached C\$10 billion equivalent across different currencies, and close to C\$3 billion domestically. The CAD portion could potentially increase next year. We're targeting roughly C\$8 billion equivalent of total issuance, CAD may take a slightly larger share. We'd like a consistent approach across markets and provide a two-day execution window for investors. Based on the feedback we got from the investor community, we're not at the stage where we feel it's necessary to do things differently. There are a number of issuances ahead of us before we can evaluate if there is sufficient size and recurrence to change our process, and that will be communicated well in advance to the market so everyone is aware.

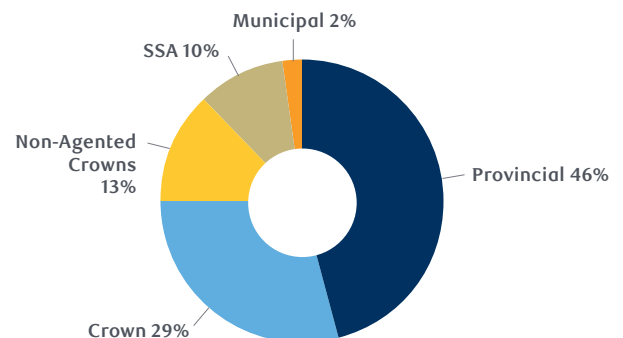
**Kevin Martin (RBC):** A question for the investors, in terms of provincial issuance, we've seen a change in the composition of issuance away from longs and towards more 10s and further down the curve, 5s and 7s. When it comes to the decision to invest on the curve, what's driving those decisions?

**Ryan Goulding (Leith Wheeler):** We build our book very much from a portfolio construction perspective and when you're building a universe portfolio such as ours, usually the spot for provincials is kind of in that 10s and out section. So it has been tougher to access primary supply in the long end, and I think that's just driven us to

**DOMESTIC TERM STRUCTURE AND SECTOR SUPPLY (2023)**



\*ex. CMB



taking more of a look at some of the off the runs and getting involved in more of the secondary flow in order to top up the provincials we need, because we simply don't have the space in 5s and 7s. That area of the curve is generally allocated to corporates for us. It has had us participate less in the primary market, not because we don't want to, but it's just the supply hasn't necessarily been there when we need it.

---

**“When you’re building a universe portfolio such as ours, usually the spot for provincials is kind of in that 10s and out section.”**

*Ryan Goulding, Leith Wheeler*

---

**Matthew Cassell (HOOPP):** CAD swap spreads had been high on a fundamental and relative basis for many years. The normalization of CAD swap spreads in 2023 has created many opportunities for accounts. I think that was a key contributor to the demand for shorter dated product by asset swap accounts, and that shift shorter down the curve. By my estimate, the asset swap community in Canada accounts for at least half of the demand for sub-10-year HQLA assets in Canada in a typical market. The decrease in swap spreads only added fuel to the fire from this chunky investor base. I think it's an important reminder that the CAD asset swap community is such a significant investor base.

---

**“I think the normalization of CAD swap spreads in 2023 was a key contributor to the demand for shorter dated product by asset swap accounts, and that shift shorter down the curve.”**

*Matthew Cassell, HOOPP*

---

**Abid Dobani (RBC Treasury):** Wearing two different hats, perhaps some perspective from both our liquid asset portfolios and our employee defined benefit pension. This push-up in rates alongside equity market expansion and private asset appreciation was a boon for the pension world. Our global portfolio in the last public disclosure was funded over 122%. Given the structure of the defined benefit plan, any prudent risk manager would look to de-risk and match assets to liabilities. Long provincial issuance has helped plans like ours de-risk, and the lack of widening in spreads speak to the natural need. From the liquid asset portfolio aspect, the struggle for us has been provincial issuance has been further out the curve (where we don't have a natural offset), however it's been nice to see pension issuance in our part of the curve, the repo market developing, and the capital treatment for pensions changing. These are all positives. Treasuries have historically had limited options in HQLA in Canada outside of

government (federal and provincial) bonds, CMBs, and NHA MBS. Bringing in this well-funded and liquid asset class provides some much-needed diversification to our Canadian portfolio.

**Alex Caridia (RBC):** In terms of a view on spreads given increased supply. Anyone want to venture some thoughts there?

**Abid Dobani (RBC Treasury):** The efficiency in the retail markets on optimizing deposits has been impressive. Clients have locked in demand deposits via high yielding GICs, which changes the nature of the HQLA books we need to run as deposits now have a term associated to them. As such, the organic need for our liquid asset portfolios is going to wane. When I read the public disclosures of my peers, a similar story seems to exist elsewhere as well. I can see spreads pushing a little bit wider, but not to levels that should be concerning to anybody.

---

**“Clients have locked in demand deposits via high yielding GICs, which changes the nature of the HQLA books we need to run as deposits now have a term associated to them.”**

*Abid Dobani, RBC Treasury*

---

**Matthew Cassell (HOOPP):** I think domestic spreads could be challenged over the next couple years as we roll thru the COVID maturity wave. If we continue in an environment where foreign currency markets are perhaps more challenging, like the USD or EUR market are now, there's a high probability that we could have a continued bias towards domestic issuance continued by Canadian provinces. This has the potential to create a supply imbalance that I think could lean on spreads and push them wider over time. The corridor to a softer widening in spreads comes through a soft economic landing given the large pace of maturities makes any fiscal miss from a hard economic landing generating a wall of supply.

I think if you go through any of the provincial budgets, they've enjoyed strong budgetary performance owing to strong nominal GDP growth over the past few years that has helped on the revenue side. The expenditure component of budgets typically tends to lag, and we are now seeing a buildup of expenditures as wage settlements and infrastructure spending comes to fruition. But this growth in expenditures isn't really being modeled in forecasts.

**Ryan Goulding (Leith Wheeler):** I'm the same way as that. We've been underweight spreads for quite some time, not necessarily because we think they're going to go a lot wider as Abid said. But when I look at where they are now, the balance of probabilities, I think that they're more likely to widen than to tighten. I can construct a portfolio while I would still have positive carry in other ways, and I can have exposure to that potential widening.

**Jason Daw (RBC Rates Strategy):** Just to add something from a macro perspective, obviously spread products are linked to what's happening in the credit markets, and if we look out to 2024, if there is a soft landing it should be good for spread markets. But again, like Ryan mentioned, where's the probability of risk, right? Is it that the economy's better? Probably not. Is it that the economy's worse? That's a more likely risk, and if it's worse, do we get to some type of risk-off type of event in financial markets? From a risk probability standpoint, there is a greater chance spreads are wider rather than tighter in 2024.

**Alex Caridia (RBC):** Dave, perhaps talk us through the changes to your program as you see them. Most around the table here will be aware at a high level, but is there anything you want to highlight there?

**Dave Ayre (CMHC):** It's been an interesting year and obviously a challenging one for our investors. There has been uncertainty, but I think as we sit here post Fall Economic Statement, we ended up with a great outcome. I look back on everything that transpired with the announcement of the consultations in March 2023, and I will say, we saw our investor community, our dealer community, and mortgage originators really step up to be part of that consultation process. When we all sat together at the table with the federal government and the Bank of Canada, we heard their opinions, and the value of the program came through loud and clear.

We talked about the angst with Canadians and the hyper focus on affordability problems, which had really started to surface in 2023. With the rise in interest rates, mortgages, rents, everything became more and more expensive. With the federal government at the table, the position that we were hearing was how this has been a pretty good tool for the last 22 years to create housing supply, initially more on the homeowner side, but more recently as we've adjusted policy, used as a tool to create a lot of multi-family rental housing in Canada. So, throughout the consultations, a theme developed that we could use this program as a tool to build more rental housing.

It's certainly not a singular solution to the affordability issues, but it is valuable in creating more rental housing that people can afford. As a result, back in September, Finance Minister Chrystia Freeland announced a C\$20 billion increase to the program, with the caveat that it would only be used for multi-family rental, which was a great decision by the federal government. The decision was informed by the consultation process. With the timing and the focus on housing affordability, it ended up being a blessing in disguise, because it really did highlight the value of this program in creating housing supply. If we fast forward to where we are today, we've been through a lot of uncertainty this year, but I believe we came to a great compromise. In the end we have a bigger program, with the lion's share of everything added going towards funding multi-family rental for Canadians, which is great news.

---

**“In the end we have a bigger program, with the lion's share of everything added going towards funding multi-family rental for Canadians.”**

*Dave Ayre, CMHC*

---

The unit targets are significant, with a goal of the expansion to create up to 30,000 more new rental apartments per year. This is going to create real housing for Canadians and the great thing is there's no cost to the Canadian taxpayer. We are adding C\$20 billion in financing, and we get a lot of new housing supply. We have a hybrid solution, where we will continue to have a significant market issuance program with a component that's funded by the government. It's a win-win for everybody.

**Alex Caridia (RBC):** In terms of liquidity, you hearing anything since that's been announced? Is that going to take away liquidity? Particularly with the mortgage originators in the back of your mind. How do you think that'll play out?

**Dave Ayre (CMHC):** There are some considerations to go along with the unique nuances within the program. These will need to be addressed when rolling out an operational plan. But the federal government and CMHC are both strongly committed to the smooth functioning of the financial markets and obviously don't want to disrupt anything. Moving forward, everything will be taken into consideration as we develop the plan of engagement.

**Alex Caridia (RBC):** Nic, most central banks are shrinking their balance sheet. Some investors would call this QE. What would you say to that?

**Nicolas Moreau (Department of Finance, Canada):** As a result of their bond-buying programs implemented in response to the pandemic, the Bank of Canada's holdings of GoC bonds peaked at almost C\$440 billion in December 2021. Since then, the BoC holdings of GoC bonds has declined steadily reaching less than C\$270 billion in September 2023. To reduce its balance sheet, the Bank of Canada has engaged in passive quantitative tightening whereby it lets maturities roll off and does not reinvest the proceeds to buy more GoC bonds. This passive way of reducing the balance sheet is predictable and relatively smooth. The other approach to reduce the central bank balance sheet can be labelled active QT and consists of outright selling of bonds to reduce the size of the balance sheet faster. This approach is not common among advanced economy central banks and would likely have more material impacts on yields. While there is inherent uncertainty related to when passive QT by the Bank of Canada will end, Bank of Canada officials have said publicly that quantitative tightening is likely to end in late 2024 or the first half of 2025.

---

## “Bank of Canada officials have said publicly that quantitative tightening is likely to end in late 2024 or the first half of 2025.”

*Nicolas Moreau, Department of Finance, Canada*

---

**Alex Caridia (RBC):** Over to some of the provinces then to talk a little bit about domestic issuance before we wrap up. Perhaps Sam, do you want to start just in terms of your issuance plans domestically and anything worth highlighting?

**Sam Myers (British Columbia):** We continue to watch the domestic market. It's a very important market for us. One of the themes for this past year was timing of our domestic issuances. There's been times where there's been careful navigation in and around blackout periods. This year, we've really gotten ahead of the funding requirements for the fiscal year probably to a greater extent than we've done in recent memory, and I think that's been serving us well given that we have an election in 2024. Our choice for term in CAD remains 10s and 30s, although there's been much more borrowing on the 10-year side. So, as you calculate the weighted average term to maturity, it's gradually coming down a little bit from previous years. We've supplemented it with some very attractive offshore issuance on two fronts, with a 5-year USD global issue and a 10-year USD global issue that were tremendous outings, one for US\$2 billion, one for US\$2.25 billion, and certainly the amount of corresponding work that would have had to have been done in CAD would have been quite formidable given the traffic that is existing in the domestic market. We're open to other terms as well in Canada, and we've again looked at those shorter terms when considering USD opportunities. It's been a good year so far.

**Nicoleta Oprea (Manitoba):** The Province will continue to focus on the domestic market, 10s and 30s benchmarks and will follow demand. We have the conversation, and where there is demand, that's where we end up printing. With the issuance of the 10-year US global debenture this year, we have room in the 5-year maturity bucket, which traditionally we left that for the USD market. Historically the arbitrage

worked better in that shorter part of the curve. There is now an opportunity for us to possibly look at 5-year in the domestic market. The Province is open to other terms, same as Sam was just saying; it depends on the needs and depends on the demand.

**Carlos Yep (Ontario):** This fiscal year Ontario's long-term borrowing requirement is C\$34.7 billion, and it increases to C\$37.4 billion next year followed by C\$37 billion. Over the last 15 years. We've issued a low of C\$27 billion once and a high of almost C\$60 billion. We're still targeting 10-25% international. This year has been a little bit tougher for Ontario to issue in foreign markets with too few windows and a little bit too much supply from other competing Canadian issuers. Ontario is still targeting USD or EUR. Ontario is willing to pay up for core strategic currencies.

**Kevin Martin (RBC):** Carlos, one of the interesting developments in the program this year is the reintroduction of the FRN program. I think it's the first time in roughly five years we've seen Ontario do a FRN CORRA based. Can you walk us through the transaction and what your plans are going forward in terms of FRN issuance?

**Carlos Yep (Ontario):** We've been issuing FRNs since 2010. We issued every single year for about nine years raising just over C\$16 billion. On average during that period, we would issue roughly C\$1.5-2.5 billion in FRNs annually. It was part of our platter of raising money. We stopped in 2018 with CDOR cessation coming. We did watch CMB take the lead on CORRA FRN issuance. With the CMB program announcements in the federal budget this year, Ontario delayed issuing a CORRA FRN. We did wait for the Federal Fall Economic Statement to make sure that investors knew what was happening to CMBs before issuing Ontario's first CORRA FRN. Most of the times Ontario would assess the FRN market right after a CMB FRN issue. Sometimes we would see a lot of demand and we would issue C\$2-2.5 billion. The last Ontario CDOR FRN was in 2018 and just matured in August 2023.

**Tammi Keith (Saskatchewan):** We focus on issuing 10s and 30s like the rest of our counterparts and we listen to investor demand and are receptive to it. We will evaluate an FRN issuance as well. The FRN issuance went well for CMHC and Ontario, and it's an instrument that would diversify our funding program.

## OFFSHORE MARKETS

**Alex Caridia (RBC):** Moving on to offshore markets, and I'll start with you Natalie, congratulations on your recent nomination for Kangaroo deal of the year on one of your Kangaroo issues. How does that fit into your overall plans offshore? How has your Kangaroo strategy come together and how does that fit in next to some of the other currencies?

**Natalie Steshenko (CPPIB):** We were thrilled to win the award and receive recognition from market participants. Overall, we had a very strong year in the Kangaroo market as we achieved A\$3.75 billion in funding across 3s and 5s and received strong participation across domestic and international buyers.

As noted, our programmatic approach to CAD of up to 50% issuance provided superior execution opportunities in our other core currencies. Specifically, we leaned into AUD and GBP markets vs USD and EUR this past year which was different for us as we found attractive opportunities in those markets, while USD still had a bit of Canada incorporated saturation from the prior year.

The challenge in offshore markets this year was finding strong issuance windows given volatility, data releases, competing supply and changing investor sentiment. This was amidst a market backdrop of credit and swap spread volatility which were difficult to manage in global markets and will be a challenge heading into Q1 2024. The EUR market remained expensive to issue in on a SOFR basis and became very volatile in the second half of the year.

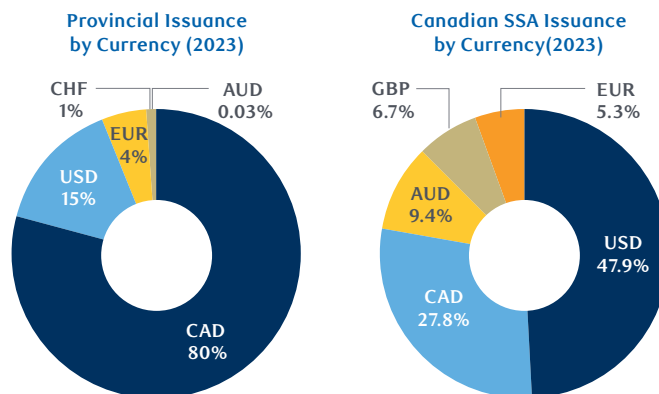
**“The challenge in offshore markets this year was finding strong issuance windows given volatility, data releases, competing supply and changing investor sentiment.”**

*Natalie Steshenko, CPPIB*

**Alex Caridia (RBC):** Thank you. Natalie mentioned EUR being less cost effective this year versus USD, which is relatively a new dynamic this year. Anything you want to mention there Jigme?

**Jigme Shingsar (RBC):** First of all, USD remains the primary alternative to CAD, and supply there was up almost a third. That's despite Carlos being very inactive and willing to pay the price. I think it's fair to say despite that uptick, if you look at it over the last few years, Canadian supply generally has not really kept pace for the growth of the market. But I think Canadians do have a special franchise, particularly in the USD market. I would note that despite relatively light supply, Canadian issuers in particular provinces are able to extract more duration than the average SSA, which reflects the strong historical investor base there.

## PROVINCIAL AND CANADIAN ISSUANCE



**“I would note that despite relatively light supply, Canadian issuers in particular provinces are able to extract more duration than the average SSA, which reflects the strong historical investor base there.”**

*Jigme Shingsar, RBC*

Very optimistic in terms of that capacity still staying. Alex alluded to the EUR market. The EUR market obviously has had a little bit more challenge post ECB reversing some of the easy money, and we're anticipating that that will probably add to some of the reversal of the trend we've seen over the last five years of EUR issuers printing more EUR. So, if we start seeing at the margin a little bit more supply in USD, you could argue that things could get a little more competitive for issuers. I don't think that's necessarily a problem, but I think it just means that there's going to be more differentiation among the issuers in terms of people would look at issuers more closely. This is where the IR efforts that you guys make really do pay off because instead of just getting a generic sort of Tier 1, Tier 2 type pricing, I think you'll see people look more closely in that scenario. I think Canada still looks very good.

**Chad Buffel (EDC):** We have a bit of an advantage in terms of the currencies we need. So, barring some of the issues you raised there, I think the challenges, especially when you talk about it on the EUR side, still won't prevent us from doing EUR. We have natural needs on that front, so there's a nice offset. In terms of other challenges, like market curves shifting, we see that as a lesser challenge than finding the right issuing windows.

Having the right program and the right execution for those deals is going to be the bigger challenge next year. It probably will lead to diversifying more broadly across some of the markets and terms. If it's one GBP deal done, there might be two or three by the time the year is out. We must examine all the currencies. Even the antipodean ones may have other possibilities for us. Flexibility for different terms as well, just to make sure that we're not issuing on top of everybody, is going to be the challenge. Program wise, we're still looking to repeat what we did this year, but if it is getting tighter and tougher, it's just a matter of how we all work together to collectively achieve our goals.

---

**“It probably will lead to diversifying more broadly across some of the markets and terms.”**

*Chad Buffel, EDC*

---

**Andrew Bastien (PSP):** In terms of offshore markets, we compare everything to domestic funding levels. We tend to go into the fiscal year saying we will do a USD benchmark, a EUR benchmark, we'll do some domestic funding, but we have the flexibility to change the plan based on pricing and demand. EUR and USD have not looked good from a pricing perspective for a long time, we really focused more on the domestic market this year, which was good for us. We had a lot of demand due to some of the rumblings around the uncertainty of the CMB program. I think we benefited a bit from that during the year, which was great. We're also in the process of setting up a Kangaroo program. AUD is really important for us, it's the biggest overweight that we have in our asset portfolio. We have this natural need to create liabilities in AUD, as people say it's kind of a “natural hedge” in terms of wanting to issue debt in AUD. We should have that Kangaroo program set up in the weeks to follow and we're hoping in Q1 2024 to do our first AUD benchmark transaction.

---

**“We have this natural need to create liabilities in AUD, as people say it's kind of a “natural hedge” in terms of wanting to issue debt in AUD.”**

*Andrew Bastien, PSP*

---

**Alex Caridia (RBC):** Great, on the investor side, it's a good segway where when you talk about overweight in Australia, do you run multicurrency portfolios and if so, which currencies are you overweight or underweight?

**Ryan Goulding (Leith Wheeler):** We do, but our exposure is largely through futures. It is very rare that we would take cash exposures

unless they're extremely attractive, but we do have exposures to basically every developed global market with an active futures market.

**Abid Dobani (RBC Treasury):** We have organic balance sheets in CAD, USD, GBP, and EUR that we actively manage. Issuance in Canada has historically been in the form of bullet instruments, with your collective treasuries managing the ALM mismatch. That has protected buyers in this rate environment, and kudos to you all for prudent management. On the flipside, the impact of what's happened in the US MBS market has really changed the mindset of what a liquid asset is to many bank type buyers. Internally we consider the liquidity value of global assets not just by their HQLA rating, but also a mix of the ability to sell outright, pledge in repo or to a central bank, and issuance buybacks. As such, our thesis around HQLA has had to augment post COVID. One last note is as overnight rates move aggressively, opportunities avail themselves in shorter dated FX arbitrage, and we have a good governance framework around how we can best optimize shareholder return by taking advantage of dislocations. Canadian issuers tend to be very cognizant of cross currency basis funding levels, so the opportunities tend to be more of a secondary market story than a primary market opportunity.

---

**“As overnight rates move aggressively, opportunities avail themselves in shorter dated FX arbitrage.”**

*Abid Dobani, RBC Treasury*

---

**Matthew Cassell (HOOPP):** The lesson from the last couple years is that the Canadian HQLA market works extremely well for issuers, investors, and dealers. Investors have been able to access consistent secondary market liquidity and what's otherwise been a tumultuous time globally. Much better liquidity than anything they would have gotten in the EUR market. Issuers have had continued access to markets with stable spreads in Canada – a bastion of tranquility.

To Abid's point earlier, the CAD market balances good liquidity in both primary and secondary markets, decent investor returns and attractive assets. QT has been painful as it reprices assets cheaper, but ultimately has been getting valuations back to reality as a whole.

---

**“We'll keep focusing on our core markets that we're developing before we develop something that could be systematically meaningful elsewhere.”**

*Amaro Cosme, CDPQ*

---

**Amaro Cosme (CDPQ):** We'll remain focused and disciplined on maintaining our USD presence. That is not to say that we won't consider alternatives in AUD and GBP, but it will depend on market conditions and investor appetite. We'll keep focusing on our core markets that we're developing before we develop something that could be systematically meaningful elsewhere. At the same time, CDPQ has a 75% exposure outside of Canada. We have exposure in Australia, UK, Europe, etc. There are opportunities to consider those. When the market expects us to build something, it won't be with the regularity that you've seen in USD and CAD, at least

initially. What we noticed is the sizes of the benchmark issues needed to be adapted this year. We're agile and in a good position to capitalize on those windows of opportunities and when the investor demand is there, and the conditions allow us to access the market. It's important to us to maintain a presence in each market and demonstrate that CDPQ will continue to be a regular issuer.

**Alex Caridia (RBC):** Great, thanks everyone for joining our annual roundtable once again.

# SSA Roundtable



## ISSUER REPRESENTATIVES



**Anthony Ostrea**  
Senior Treasury Specialist,  
Asian Development Bank  
(ADB)



**Aldo Romani**  
Head of Sustainable Finance,  
European Investment Bank  
(EIB)



**Andre Delgado**  
Funding Officer, Inter-  
American Development Bank  
(IADB)



**Jorge Grasa**  
Senior Funding Officer,  
European Investment Bank  
(EIB)



**Randy Ewell**  
Senior Financial Officer,  
The World Bank

## MODERATORS



**Jigme Shingsar**  
Managing Director  
RBC Debt Capital Markets



**Daniel Wilson**  
Director, Canadian SSA  
Syndicate, RBC Debt Capital  
Markets

## SSA KEY THEMES

1

**Steady Funding Programs and Diversification in Currencies:** SSA Funding requirements remained mostly steady in 2023 compared to the year prior and issuers were able to navigate the continued challenging conditions of ongoing market volatility and central bank rate hikes. Market participants noted the underperformance of EUR relative to USD in late 2023 and that such continued underperformance has the potential to impact funding strategy in 2024. However, they remain focused on a diversified funding strategy which includes markets away from their core currencies of USD and EUR and would also seek to push for duration where possible.

2

**Market Volatility and Investor Demand:** Navigating a volatile market backdrop in 2023, SSA issuers tended to rely on their home currencies for most of their funding. While currency diversification remains a common goal, the final currency mix of SSA issuers' funding programs were ultimately determined by investor demand as well as cost of funds. In addition, more challenging execution conditions and timing constraints around central bank events and economic data releases made for narrower and more crowded issuance windows.

3

**ESG Themed Bonds Driven by Investor Demand:** ESG issuance continues to be favored among Maple SSA issuers and investors in the Canadian market; 13 out of the 16 benchmark CAD SSA transactions in 2023 have been in ESG format, ranging across Gender, Green, Health, Sustainable and Social bonds, and issuers noted that the space has also reached maturity in Europe. Market participants noted that they have a healthy pipeline of ESG projects that could support further themed bond issuance as well as sustainability-linked offerings.

4

**Maple SSA Issuance Saw a Record High in 2023:** The CAD Maple SSA primary market has seen an all-time high of C\$10.0bn print across 16 transactions in 2023, a 61% increase from 2022 (C\$6.2bn). Bank Treasuries remain the most active investor type in the Canadian Maple SSA primary market (~40% in 2023), with Central Banks / Official Institutions increasing from previous years driven by relative value to CMBs. Issuers were also able to extend duration in 2023 as the average maturity of new CAD SSA Benchmarks in 2023 was 4.5-years, up from the 3.7-years seen in 2022.

## FUNDING REQUIREMENTS

**Jigme Shingsar (RBC):** Thank you all for joining. I'm joined by Daniel Wilson who runs our CAD SSA syndicate. The intention today is to focus on CAD, but this is also an opportunity to talk about your institutions more broadly, as there's a significant investor base in Canada that participates across the globe and in many of the other issuances as well. Can't believe how quick the year has gone.

Starting with ADB, how did your funding program go this year? Did it have any changes over the course of the year, as we've seen sometimes some issuers have changes in their funding program during the course of the year. Are there any new developments and do you have any thoughts about what your funding might look like next year?

**Anthony Ostrea (ADB):** Thank you Jigme and RBC team for having us again this year. We ended this year at around US\$29 billion in terms of our program, which included prefunding for 2024. That is consistent with the projected level at the start of the year. So far this year we've done close to 140 transactions across 25 currencies, the latter is a record for us, and included currencies that ADB has issued for the first time. We remained active in core markets, specifically USD, AUD, GBP, CAD, where we were able to access various points in the curve. Private placements were a nice complement for us, allowing us to average down our borrowing costs as well as issue in the long-end. Similar to the past, the average tenor for borrowings this year came in around 5-year. Looking into 2024, the borrowing program is expected to be higher to between US\$30 and US\$34 billion, inclusive of some pre-funding.

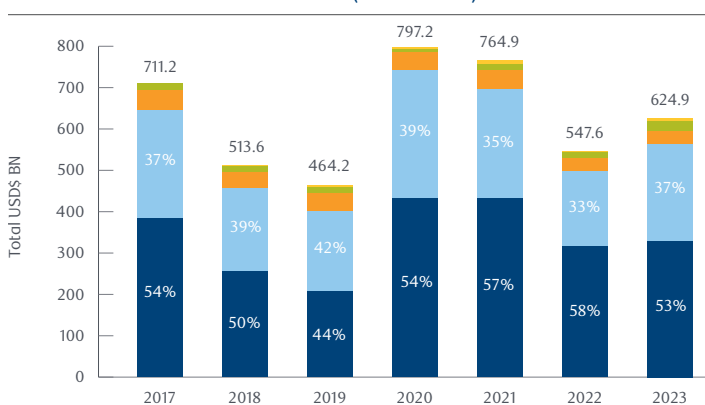
**So far this year we've done close to 140 transactions across 25 currencies, the latter is a record for us, and included currencies that ADB has issued for the first time.**

*Anthony Ostrea (ADB)*

**Jigme Shingsar (RBC):** We have seen some drifting in the EUR market as of late which is a big funding source for many issuers. Do you expect any of that to have an impact on anything you're doing?

**Anthony Ostrea (ADB):** We will remain flexible and nimble in our approach to enable us to pivot quickly and efficiently to market demands. This year we were not in the EUR market based on the basis. We maintain a presence in multiple markets, and we will continue to pursue diversification as a strategic objective. This may be less straightforward in 2024 if there is more reliance on the USD market, and how that impacts clearing levels and issuance windows in USD.

**SSA SUPPLY BY CURRENCY BY YEAR (2017-2023)**



\*Excludes domestic sovereigns, includes EU, Sub-Sovereign includes Provinces, Municipals & Lenders

**Jigme Shingsar (RBC):** Thank you. Moving on to World Bank, Randy, I know you have had a different funding year. How is it going so far and do you anticipate any changes in terms of your strategy?

**Randy Ewell (World Bank):** Our funding program is expected to be between US\$50-55 billion for this fiscal year. Since we're on a fiscal year basis from July to June, we are approaching the midway point of our funding program and are on track with our target. We have been active in USD of course which is the largest source of our funding program, but we have been active in EUR as well. Both IBRD and IDA have each done a EUR benchmark deal, a IBRD 15-year and a 30-year for IDA. We have stayed active in EUR as well. We aim to remain diverse in the currencies that we do. We're quickly approaching 20 currencies so far this year and will seek to expand that. The average duration of our funding is currently about 7.5-year. Since the lending side of our balance sheet has long duration, we do strive to issue longer tenors if possible. We feel like we are ready for the January glut of funding activity.

**Our funding program is expected to be between US\$50-55 billion for this fiscal year. [...] there's a push to be doing more in some of the emerging markets.**

*Randy Ewell (World Bank)*

**Jigme Shingsar (RBC):** Are there any new developments at World Bank? There is a new head of the World Bank.

**Randy Ewell (World Bank):** Yes, The World Bank's new president, Ajay Banga has recently joined, and there is a different tone and tenor than some have seen at Cop28. Most notably is a formal

amendment to the World Bank's mission to now include the climate component which states the mission of "To end extreme poverty and boost prosperity on a livable planet." The livable planet component is a recent addition to codify the World Bank's mission of doing its work with an eye toward the environmental responsibility that we have in our project lending. Some of the other things from shareholders as well as Ajay are that they're trying to do more. We're looking for ways to stretch the balance sheet while maintaining the AAA rating. There are some discussions about how to do more in some of the emerging markets, and while we always stayed active there, I think there're a lot of different ways that we can enhance to help our borrowers mitigate exchange rate risk. There's a different tone and perhaps a bit more urgency on the work we are doing.

**Jigme Shingsar (RBC):** There's been a lot of talk about a hybrid issue and some of the initiatives were broad. Hybrids have a loan guarantee and different shareholders have different priorities. You have done a hybrid issue this year - can we expect more of that and what does that mean for the institution?

**Randy Ewell (World Bank):** Yes, you saw there was a shareholder hybrid activity for Germany. I think that we're still in the early stages of seeing how this can go, and it's a bit too premature to discuss much at this point, but we are looking at different options to expand what we can do and simply do more.

**Jigme Shingsar (RBC):** You have executed at least 1 transaction with a shareholder on a private placement basis, is there a potential that you could be doing more of that?

**Randy Ewell (World Bank):** Yes, we're looking at other ways that we can do that and expand that.

**Jigme Shingsar (RBC):** Great thank you Randy. Moving to EIB, can we have a comment on your funding program?

**Jorge Grasa (EIB):** First of all, many thanks for organizing the roundtable. I really appreciate being invited again. Our initial funding target at the beginning of the year was EUR45 billion. It increased to EUR50 billion during the year to reflect stronger disbursements on the lending side. It has already been completed, as we have issued around EUR49.8 billion in over 100 transactions across 16 different currencies this year. As always, our 2 core-currencies which are EUR and USD, have taken over 80% of the whole funding program, with EUR representing 49% and USD around 34%. Regarding the remaining currencies, they represented more than 15%, with GBP, AUD, and PLN representing roughly 4% each of the funding program. We were also present in the CAD market this year with a 5-year C\$700 million transaction. As all the issuers, we have been focusing on duration this year, which on average has reached around 7-years, and that has taken out some EMTN opportunities that we had seen on the shorter end of the spectrum.

---

**Our funding target (was) increased to EUR50 billion during the year to reflect stronger disbursements on the lending side. [...] we have issued around EUR49.8 billion in over 100 transactions across 16 different currencies this year.**

*Jorge Grasa (EIB)*

---

**Jigme Shingsar (RBC):** I think it's fair to say you have been an even a bigger issuer in the past. With all the continued pressures on your economies, is that something you think could change?

**Jorge Grasa (EIB):** We will keep on being a EUR borrower as most of our disbursements are in EUR. Maybe our EUR share goes down from 50% to 40% and then the USD goes up by a bit. Historically, EUR has been between 40% and 50% of the funding program and USD has been between 30% and 40%, so whatever we're not able to do in one currency, we try to do it in the other.

**Jigme Shingsar (RBC):** Right. You are a pioneer in the sustainable space in terms of the mix between sustainable and traditional bonds, can you comment on that?

**Jorge Grasa (EIB):** Around 1/3 of the funding program has been issued in CAB (Climate Awareness Bonds) or SAB (Sustainability Awareness Bonds) format in 2023. The size of the funding program will be larger in 2024 and the CAB/SAB share will depend on the evolution of CAB/SAB eligible disbursements.

---

**Around 1/3 of the funding programme has been issued in CAB (Climate Awareness Bonds) or SAB (Sustainability Awareness Bonds) format in 2023. The size of the funding program will be larger in 2024**

*Jorge Grasa (EIB)*

---

**Jigme Shingsar (RBC):** Any comments on any other new developments at EIB? Are you a part of the discussion or potential initiative on hybrids or is that too premature?

**Jorge Grasa (EIB):** Too premature to be honest. As always, we are monitoring the market and seeing what's happening in that space, but we haven't really started to prepare anything at all.

**Jigme Shingsar (RBC):** Thank you for that. Over to IADB, can you comment on the funding program?

**Andre Delgado (IADB):** We completed the program back in November and we already did some prefunding for 2024. We issued US\$18.8 billion (including prefunding) in 65 transactions across 10 different currencies. USD remains the core market as it's the currency of disbursements for the majority of our borrowers. This year was slightly different as we did 5 USD fixed-rate benchmarks including a prefunding trade priced in December. We did a 5-year, two 10-years, and two 3-years. Total in USD benchmarks was US\$10.75 billion. In addition, we remained active in strategic currencies, including CAD. We did two CAD trades this year, and we are confident we are going to maintain our commitment there in the future. We continue to look to diversify the investor base and remain attentive to issuance opportunities and currency diversification. In 2024, the borrowing program will likely be a bit higher, even considering the prefunding. I would say it is a US\$19 billion program plus or minus US\$1 billion. It's slightly larger, but not significantly larger.

As for new developments, we are now revising the new institutional strategy to align the Bank with the evolving needs from the Latin American and the Caribbean region. That's expected to be launched during our next annual meeting in March 2024. The pillars being prioritized are social issues such as food security, poverty, inequality, health, and education. Climate change remains in the forefront, and we are also focused on sustainable, digital, and physical infrastructure and other areas such as gender diversity and inclusion. Another development at the institutional level I wanted to mention is the creation of the Office of the Special Advisor on Climate Change and the Office of the Special Advisor on Gender and Diversity. The new offices are tasked to improve internal coordination and elevate these strategic priorities. This organizational change shows the commitment of the Bank to climate change and gender and diversity as part of our strategic agenda.

## ESG & THEMATIC BONDS

---

**Jigme Shingsar (RBC):** Thank you. That was a great overview of your institutions and funding programs. Moving to the ESG section, Andre what are your views on the continued growth of ESG demand, or the underlying trend of more awareness and compliance? You've just gone through the framework, and we have seen some mixed headlines on ESG recently. Do you just see this as a necessary check, or just a speed bump on the way?

**Andre Delgado (IADB):** It continues to be an important part of our mission and our purpose, and it is part of our DNA. The sustainability and development of Latin American and the Caribbean is very important, and we work closely with our member countries with focus on those areas that I already mentioned which are health, education, infrastructure, and climate action.

On the back of that, we are also updating our sustainable development bond framework. The original sustainable development bank framework was done in 2019, and now we are updating it to reflect the recent developments and updates in the ICMA principles and guidelines. We are also taking on board investor feedbacks we have received over the years after issuing SDB. We are expecting to have a second party opinion on the updated SDB framework, to be finalized in the first half or first quarter of 2024.

---

**We issued US\$18.8 billion (including prefunding) in 65 transactions across 10 different currencies (in 2023). USD remains the core market as it's the currency of disbursements for the majority of our borrowers.**

*Andre Delgado (IADB)*

---

**Jigme Shingsar (RBC):** Thank you Andre. Any comments on hybrid capital?

**Andre Delgado (IADB):** We have been following recent developments around hybrid capital. We are not looking at the moment for a capital increase as we have sufficient capital to cover a sustainable level of disbursements in the near future. Therefore, we are not looking closely into it, but rather monitoring developments. We remain focused on optimizing our balance sheet and are happy to explore possibilities for more efficient use of our balance sheet as always.

---

**We are updating our Sustainable Development Bond framework and taking on board investor feedback and experiences we have been accumulating over the years issuing in the ESG market.**

*Andre Delgado (IADB)*

---

As mentioned, we are updating our Sustainable Development Bond framework and taking on board investor feedback and experiences we have been accumulating over the years issuing in the ESG market.

The update aims for the realignment of the SDB program with the latest ESG market developments, especially ICMA principles and guidelines. This is to ensure that the framework remains effective, and the Bank stays at the forefront of sustainable finance best practices. On that note, we are looking to have a focused strategy with targeted issuances in ESG format in specific markets, but not necessarily all of them. The idea is to issue in those markets where there is a clear benefit and investor interest. We would like to cater to our investor base, taking into consideration the range of investor views regarding ESG. At the same time, we also want to attract a dedicated base of ESG-focused investors in the relevant markets. The CAD market for instance is a good example, because we have recently done all the benchmarks in SDB format, including the very first SDB done when the original program was launched in 2019. While SDB and CAD remain very close to our hearts, we might be considering issuing conventional bonds in CAD too.

**Jigme Shingsar (RBC):** Aldo you've been with the development of this market from the very beginning. What are your thoughts generally, in terms of the direction of the market and the continued momentum with some of the challenges around things like energy prices and so on, leading some to question whether it is slowing some of their activities. How do you see that playing out in your institution?

**Aldo Romani (EIB):** My view is positive: use-of-proceeds Green, Social and Sustainability (GSS) bonds are increasingly producing value for investors and for society. This is because of the development of a market framework which is progressively making it possible to separate facts from words based on objective criteria established by law. I am referring in the first place to the EU legislation on sustainable finance, notably the EU taxonomy regulation and the regulation on European green bonds; the same approach, however, is also informing the initiatives of official authorities in a growing number of jurisdictions beyond EU borders. The goal is to help markets assess “sustainable” bonds by enhancing the comparability of their use of proceeds – for more efficient pricing of these as well as of complementary investment opportunities. This endeavour gives substance to the promise of transparent and reliable impact that was made at the very inception of the green bond market. It thus reinforces the *raison d'être* of this segment by strengthening its public policy value.

For market practitioners, it is not just a matter of static compliance with the law. In practice, legal prescriptions for sustainability disclosures can only be implemented progressively. For both issuers and investors, green bonds provide an ideal tool to kickstart and manage the improvement of disclosures (which includes the creation of the necessary infrastructure) as a process reflecting their individual circumstances - well before full regulatory compliance and Taxonomy-alignment. This voluntary, step-by-step approach can combine classification, investment selection and reporting in a tailor-made fashion.

Properly structured, this type of green bonds permits markets to monitor how things are changing in practice rather than in theory, giving them the opportunity to reward progress in the right direction. The Taxonomy-based mapping of the use of proceeds, the setting of meaningful action targets, the pragmatic implementation of those targets in a way that can be monitored timely and uniformly across jurisdictions are all essential components of a pragmatic strategy of gradual application of the Taxonomy and gradual alignment with the EUGBS.

A realistic approach to the transition of the economy is needed to engage the economy in the proactive delivery of meaningful results, and an important part of the solution is to empower markets to drive this process via efficient pricing of the required sustainable financing. This explains the policy relevance and support that the EU affixes to green bonds. Ad hoc “regulation”, a legislative instrument of the EU which applies directly at national level, has been put in place to secure fair competition in a truly single green bond market – to facilitate and enhance the efficiency of investment decisions. This framework thus creates a strong narrative for green bonds also from the perspective of the capital markets union. It is entering into force on 21 December and will apply on a voluntary basis from the end of 2024, providing investors with a touchstone to steer the transition more effectively, both within and outside the EU.

The gradual application of the technical screening criteria as well as their gradual refinement where appropriate are equally instrumental to this policy. In the EU, a Platform on Sustainable Finance (PSF) has been created by law to facilitate the dialogue between practitioners and legislators, to foster usability and promote implementation. In 2023, the PSF has worked on a Compendium of Market Practices that will be published in the first few weeks of 2024 and shed light on practices that can be taken as reference by users<sup>1</sup>. EIB and ESM have co-led the workstream on public sector and collected evidence covering over 90% of green bonds issued by this sector in the EU. The prevailing approach to Taxonomy-based disclosures is an initial focus on substantial contribution coupled with a gradual integration of other elements of the Taxonomy (Do-No-Significant-Harm, Minimum Safeguards), which are generally deemed to require more time. In 2024, the PSF is bound to provide dedicated guidance in this field – for issuers that are not in scope of EU legislation, e.g. public sector and non-EU issuers – to accelerate a gradual and market-driven uptake of the EUGBS. EIB and ESM will lead this workstream with the help of market practitioners.

EIB is very supportive of this pragmatic approach and has applied it consistently for the past few years, proving its heuristic value for concrete action. After a timely reorganization of the available information according to the logic of the Taxonomy, the Bank has gradually aligned its CAB-allocations to Taxonomy-eligible lending activities with the technical screening criteria for substantial

1. The Compendium has meanwhile been published and can be accessed [here](#). The core conclusions are summarised on pages 176-179 of its [Annex](#) and were commented on by lead experts in a [webinar](#) broadcast by the Commission and the PSF on 6 February.

contribution of the Climate Delegated Act. This result, audited with reasonable assurance by KPMG, now permits to focus on detailed fact finding on DNSH and MS for the same lending activities as they continue to disburse. After a comparison of EIB's environmental and social principles and standards with the provisions of the Taxonomy regulation, EIB's evaluation experts are now performing a detailed analysis at project level, starting with the least controversial sectors, clarifying which information is available, and ascertaining whether missing information can be provided by the final users of the funds. This process, which will generate positive knock-on effects also in other areas of the Bank's activity, is being facilitated by the lending officers, who add a welcomed reality check in terms of the usability and workload issues raised by their interlocutors regarding the regulatory requirements. The results of this analysis will be presented to the PSF, putting its review and guidance on a tangible footing.

To summarize: in the EU and elsewhere, the market-driven legislative frameworks under development are making a clear distinction between ESG as a generic label, whose substance is difficult to assess and compare uniformly, and ESG as a targeted approach with focus in the first place on substantial contribution to primary sustainability objectives to be measured by reference to objective criteria. This is positive for the credibility of GSS use-of-proceeds bonds and therefore for their demand in the market.

---

**[...] investors are increasingly attentive to the substance that Climate and Sustainability Awareness Bonds, and more generally use-of-proceeds bonds, provide.**

*Aldo Romani (EIB)*

---

**Daniel Wilson (RBC):** Around 30% of your program this year was in CAB/SAB format. How do you see demand developing for these two products and for green bonds more generally in the markets outside of Europe?

**Aldo Romani (EIB):** When it comes to funding, relative market conditions drive of course the distribution and denomination of the bonds. Windows of opportunities are seized when and where the market permits. This said, and all other conditions equal, my impression is that not only within Europe, but also outside Europe, investors are increasingly attentive to the substance that Climate and Sustainability Awareness Bonds, and more generally use-of-proceeds bonds, provide. For example, I clearly remember how we initiated the exchange with Australian investors on the EU's approach - just after the entry into force of the EU taxonomy regulation in July 2020. Fast forward to today, and we see that Australia has joined New Zealand as member of the International Platform on Sustainable Finance (IPSF) and is working on its own sustainable

finance taxonomy, drawing from the experience of other international taxonomies, notably the EU's. I think that there is an advantage here for those that have looked forward rather than backward in the dialogue with investors on these subjects, because certain categories of mind are coming forward everywhere - based on the tangible results obtained in the meantime. Parameters and standards may change from one market or jurisdiction to the other, but increasingly, there is a shared approach to focus, firstly, on providing more clarity, and, secondly, on enabling a higher degree of comparability in the market. This is the bread and butter of the EU approach, which, it should not be forgotten, was developed in the context set by the G20 Green Finance Synthesis Report of September 2016 and taking into account the China Catalogue of 2015. It is not by chance that EIB and the China Green Finance Committee published a joint White Paper on the need for a common language in green finance and presented it to the European Commission's High Level Expert Group on sustainable finance in 2017.<sup>2</sup> This comparative work is now finding an echo not only in Australia and New Zealand but also in Southeast Asia. In 2023, the annual general meeting of the Green Bond Principles took place in Singapore, and the Monetary Authority of Singapore took the opportunity to present the "Singapore-Asia Taxonomy". This framework extends the classification to include activities that are not contributing substantially to sustainability objectives but do no significant harm to those objectives, or whose performance can be improved to this level. These concepts, originally developed but not yet implemented by the European Union, permit a more holistic interpretation of the transition process. The EU Platform on Sustainable Finance published them in a dedicated report in March 2022 - with input also by EIB's project experts. From this point of view, I think that everywhere this common wavelength is increasingly tuning to one single frequency. This provides also a very thrilling dimension to our activities within the context of the EU Platform on Sustainable Finance, which has a very strong focus on usability. As mentioned, a priority of the EUPSF in 2024 is to provide guidance on gradual application of the Taxonomy and gradual uptake of the EU Green Bond Standard, based on the conclusions of the recent Compendium of market practices, which reflect the evidence collected by EIB and ESM in the EU public sector green bond issuance segment last year. This guidance is thought in the first place for green bond issuers that are not in scope of the Corporate Sustainability Reporting Directive, which includes non-EU issuers. EIB and ESM, who are in charge of this workstream, hope to include into this practical guidance meaningful and constructive input from issuers and investors worldwide.

**Jigme Shingsar (RBC):** Thank you Aldo, as usual you're very deep in the detail of the developments there. We always rely on you for that. I'll turn to Randy at the World Bank. I almost look at the two of you, given that you're based out of Washington, sort of developing markets in the region. Aldo just talked a little bit about the continued momentum forward in terms of frameworks and trying to find more commonality in terms of standards. Any comments there in terms how World Bank is going about things and just your general view on ESG going forward?

2. You can access the White Paper [here](#).

**Randy Ewell (World Bank):** The team stays very engaged in all those developments. I know Colleen Keenan is very engaged with the Green Bond principles, and Sezin Paydas of course as well. At the World Bank, we are committed to a holistic approach. All of our bonds, if they're not green, they're sustainable development bonds where the proceeds fund our sustainable development lending activities. We continue to issue green bonds, and on occasion we'll raise awareness bonds based on some of the projects the World Bank might be doing to demonstrate transparency, as investors would expect. But overall, we have to be true to who we are, we are ultimately a social bank. Improving people's lives and opportunities is our core work, and from the World Bank's standpoint, climate action and working to improve people's lives cannot really be separated, they are ultimately inextricably linked. Our bond proceeds are used to achieve a positive environmental social impact, and there's no clear way to separate those two.

For example, we found it difficult to strip out green. 100% of our projects that get approved are reviewed for climate action and fund climate action as a matter of course. Other things that can be integrated in those projects, which is around 42% of funding by dollars, includes funding towards climate related lending. About 92% of all our loans include climate related funding. That is something that's simply woven into the fabric of what we do, so that's the holistic approach that we'll take. We aim to stay very transparent in everything we're doing. World Bank projects are tracked and can be reviewed online, and the project cycle as well is quite robust. With the teams on the ground, the experts that help with the technical aspects of our lending and review progress, adjusting, improving, and making course corrections on projects.

We do have a lot of data. We generate an annual impact report and we're open to take feedback on the report. In the report we maintain a subset of green bonds that are ringfenced to fund more of our targeted climate project lending, but everything else is gets pooled together and falls into the pool of funds that support our sustainable lending for positive social and climate action outcomes.

---

**[...] We continue to issue green bonds, and on occasion we'll raise awareness bonds based on some of the projects the World Bank might be doing to demonstrate transparency, as investors would expect.**

*Randy Ewell (World Bank)*

---

**Jigme Shingsar (RBC):** So, Randy, you were very early to go with a sustainable bond approach in terms of the broader funding program. Is there still an advantage to maintain a separate green bond program in the context of what you just talked about, how are you essentially due diligence your entire program?

**Randy Ewell (World Bank):** I think it's helpful in the sense that, as Aldo mentioned, it builds awareness about things that are important for investors to consider. Ultimately, we stay the course in our holistic approach. We will of course continue to issue green bonds as reverse private placements and we do a fair amount of those. I think kind of to my earlier point, all our projects are screened for climate. We don't see environment considerations as being a unique thing for us. It's part of who we are and what we do. We've taken a more holistic approach and we'll work to continue to remain transparent and improve our impact reporting.

**Jigme Shingsar (RBC):** Thanks. Aldo, I think you wanted to raise a point.

**Aldo Romani (EIB):** EIB's mission is to contribute to the development of the internal market in the interest of the Union by making recourse to the capital markets. If the EU legislators establish rules that foster the Capital Markets Union to support sustainable development, it is clear that the climate bank of the EU cannot refrain from abiding by those rules. There is also a very important practical task to be performed by the EIB in this context: operationalize those rules on the ground and flag areas that could be improved. As mentioned before, the upcoming EUPSF-Compendium is flagging a number of usability issues that may be addressed concretely in the context of the upcoming reviews of the Climate Delegated Act and the Disclosure Delegated Act. This feedback into the PSF and from the PSF into the European Commission is for the benefit of the wider market. Now, there is space for any kind of approach to sustainable issuance and reporting if this approach is implemented in a systematic way and contributes to transparency, reliability, comparability and accountability of relevant information. In fact, one also can be conducive to the other over time. This said, there is one area I think important to highlight. There is growing demand in the market, both from within and outside the EU, for technical assistance and advice on how to best facilitate the dialogue with EU investors. EU investors are increasingly orientated by the dispositions of the evolving EU legislation on sustainable finance, which has the Taxonomy at its centre. Here, I believe there are strong opportunities for cooperation between institutions like ours because in fact, the application of the logic of the EU Taxonomy, which is straightforward, helps to clarify points that are core everywhere, making them more comparable - improving the conditions for interoperability. If extra-European issuers aim for increasing support from EU investors, they will benefit from using the same language of those investors. This will permit them to present in the most effective way what they are doing and to compare their criteria with the European criteria. Local legislative frameworks retaining that logic can help this comparison, providing a more solid basis to the market to assess the differences. I think that there is a lot to do here. You might have heard of the global green bond initiative (GGBI) that was presented at the beginning of September. It is an initiative promoted by the European Commission with the EIB as coordinator of a group of initially European development financial institutions. This initiative aims to coalesce international cooperation among IFIs to promote the issuance of green bonds in emerging economies via investments

and technical assistance. It may be a good venue for developing a common language to facilitate cross border capital flows.

**Jigme Shingsar (RBC):** Great, thank you. Why don't I bring Anthony in this conversation. You've done a lot in terms of gender issuance etc. How are you looking at various themes in your portfolio and how have investors reacted to some of this?

---

## While there is universal demand for our green bonds, there are particular pockets of investors that require a green label.

*Anthony Ostrea (ADB)*

---

**Anthony Ostrea (ADB):** We have been active in Gender and some of our other themes. I wanted to highlight that ADB has 2 main ESG products. We have our green and blue bond framework, and our thematic bonds, which is comprised of 4 themes, water, health, gender and education. While there is universal demand for our green bonds, there are particular pockets of investors that require a green label such as in Swedish Krona, where we've had success in tapping. The thematic bonds are investor driven and provides the balance of responding to investor demand to be associated with specific themes that ADB is involved in, meanwhile highlighting specific projects or initiatives that ADB is funding. While initially a product targeting private placements, we've rolled it out successfully in markets such as AUD, CAD and NZD, particularly in gender and health. We've been successful at it. Since our inaugural Gender issuance in 2017, we've issued more than US\$7.5 billion in Gender bonds. In Health, which was also issued first in 2017, we've issued more than US\$3.5 billion. We continue to look at other areas where investors may have interest, and where we also have a healthy pipeline of projects, and these projects are ongoing.

---

## ADB has 2 main ESG products. We have our green and blue bond framework, and our thematic bonds, which is comprised of 4 themes, water, health, gender and education.

*Anthony Ostrea (ADB)*

---

**Jigme Shingsar (RBC):** Are there any new themes that you're particularly focused on, or you're just very much responsive to investor demand?

**Anthony Ostrea (ADB):** We're always on the lookout for new themes. We also routinely receive inquiries on new themes which requires checking to see whether ADB has projects to support that theme.

There are a few projects that we are working on, but nothing new to announce at this juncture.

**Daniel Wilson (RBC):** Anthony, you touched on gender and health as the true larger of the thematic themes of the issuance that you've done. What about the Benchmark markets?

**Anthony Ostrea (ADB):** For these themes, we have been active in AUD, CAD and NZD. I think that's primarily where we've found that investors are receptive to those themes. In EUR the green label is what resonates with investors.

**Jigme Shingsar (RBC):** Thanks. Randy, there's been more recent headlines and perhaps it's more of a North America, US phenomenon, but headlines in the Wall Street Journal, suggesting that flows into ESG products are slowing and or reversing near term. Obviously, number of candidates have almost been anti-ESG particularly some of the more conservative parts of the country. Have you seen any actual impact in terms of the investor demand out of North America in particular, but anywhere else that would reflect this? Or is this just headlines?

---

## I think that sustainability-linked bonds will be gaining traction in the market.

*Randy Ewell (World Bank)*

---

**Randy Ewell (World Bank):** Not in our space. I don't really see it. I think that you are correct in saying in North America, we may see a bit more pushback. As an example, I took a trip to two different states in the U.S. and on the same trip, there were two very different strong views. There are different views about ESG, and sometimes local legislative bodies may decide to push back based on financial interests and to protect some local industries. Others have stated that they're not keen on the direct negative screening, they believe unduly targets something seen as important locally, but these things will flesh themselves out. There were some things that I've heard from a local perspective in the US. But ultimately, at least for the World Bank, our mission is poverty and sustainability lending. We will remain true to our mission and do it responsibly with an aim to a positive sustainable outcome. We will always aim to employ best practices which will incorporate climate considerations in our focus of fighting extreme poverty. I think they understand that and have not taken issue with our work. There're economic issues sometimes at play in the US where some of the states, and some of the regions may have felt that they are under attack, but that's all outside our space and our mission. From our issuance and from the demand for our paper, no I haven't really seen any change. These things are far less controversial in Europe.

**Jigme Shingsar (RBC):** Right, but staying with theme, ultimately, demand for ESG remains quite robust. We talked about green bonds

and sustainable bonds, but do you see the market for sustainability-linked bonds?

**Randy Ewell (World Bank):** I think that the prospects are positive. A lot of that has been largely primary offerings, but I think the trend suggests a shift towards more public offerings. Anything can change with the markets, but I think that sustainability-linked bonds will be gaining traction in the market, and we should expect to see more.

**Jigme Shingsar (RBC):** Andre, any comments on sustainability-linked bonds? Do you see yourself being more active in that and do you see that sort of evolving into more of a public market? Or are we ways away from that.

**Andre Delgado (IADB):** I think the SLB market has been picking up quite a lot recently, mostly amongst sovereigns and corporates. Especially out of our region in Latin America, we have seen sovereign issuers active in establishing SLB frameworks and successfully issuing benchmark bonds, with KPIs linked to gender and climate change, in line with their views in terms of sustainable development.

The Bank's mission is to promote sustainable development in Latin American and the Caribbean. The main challenge for us to issue SLBs would be to find KPIs that would work for this product. The Bank already reports KPIs on every project and every project is

---

**We're monitoring SLB markets for opportunities in private placement where size aspiration is smaller.**

*Andre Delgado (IADB)*

---

sustainable. The key is to have KPIs that could be aggregated. For SDB bonds for instance, we take advantage of KPIs that we are already reporting in our Corporate Results Framework and will combine those in one single report. We're monitoring SLB markets for opportunities in private placement where size aspiration is smaller and could be backed by some specific project with a defined KPI that could be embedded and mirrored into a SLB issuance.

**Jigme Shingsar (RBC):** Thank you. Any comments from EIB on the sustainability linked bonds? The market for that in terms of mainstream interest?

**Aldo Romani (EIB):** In the context I delineated before, sustainability-linked bonds may be structured to clarify the issuers' plans regarding changes in the Taxonomy-based composition of their activities over time. Unequivocal reference to objective and comparable core criteria for the assessment of those activities would put a tangible edge to any kind of statement that may be made on transition efforts, creating a synergy with use of proceeds bonds. This approach may for example be useful in clarifying how activities outside the perimeter of the EU Taxonomy could be defined, indicating a viable path for the improvement of their performance. This is a crucial aspect in terms of transitioning an entity, or even an entire economy from a certain status to another, which is eventually the objective that should be in front of everybody's eyes, intentions, and plans. At this moment, for whomever is taking the sustainability in serious terms, there are challenges of course, and there are clearly more difficulties in the social areas rather than in the green ones. But the same logic can be applied in both areas. And in fact, it is exactly thanks to the comparison mechanism provided by the market that the goodness of certain proposals regarding evaluation criteria can be assessed more objectively for the benefit of the wider market.

## MAPLE SSA & THE CANADIAN MARKET

**Jigme Shingsar (RBC):** Thank you very much. Obviously ESG is a very hot topic, or very fundamental as you all pointed out. I'm assuming that will continue to be very front and center for you, and quite frankly to your investors as well.

Now, moving to the Maple market, the Canadian SSA Maple markets saw a new record in 2023, with an all-time high of C\$10.05 billion printed across 17 transactions, which is a significant increase from the previous year, and broadened the breadth of the issuers that have come to this market.

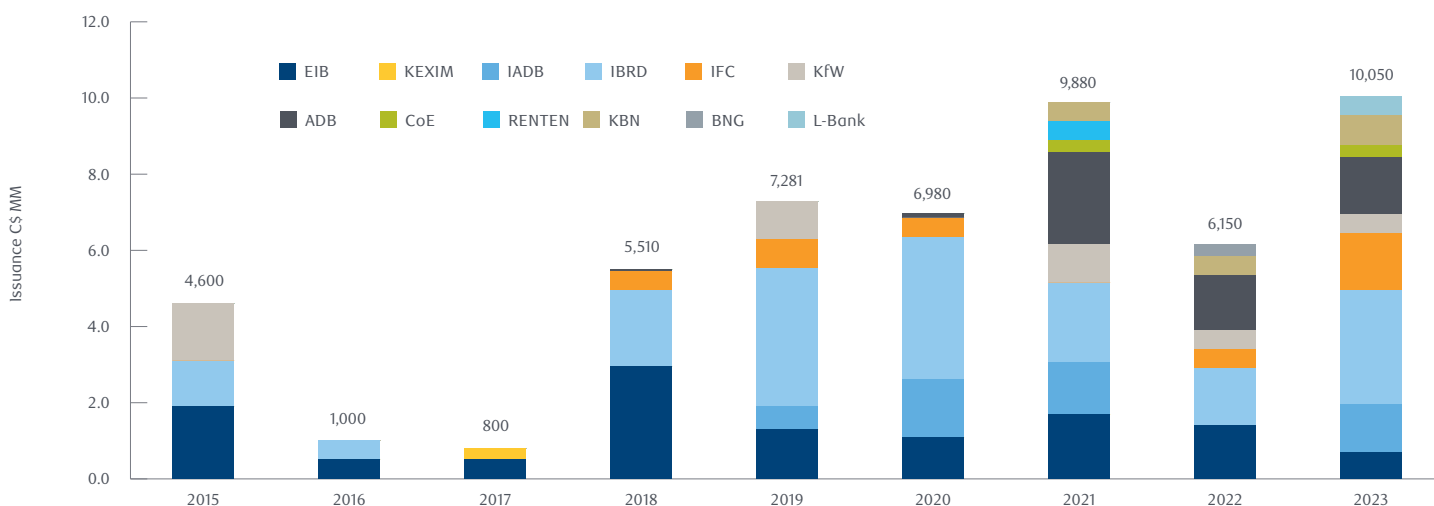
All of you have been very active and long-standing issuers in the Maple market and really the benchmarks. How do you see this Canadian market fit into your program? How do you feel about your experience today? Has it been developing in a way that you've hoped? Why don't I start with Anthony. ADB has been very active over the last few years. How has that worked for you and how do you look at the market? Is it a strategic market for you?

**The Canadian SSA Maple markets saw a new record in 2023, with an all-time high of C\$10.05 billion printed across 17 transactions.**

*Jigme Shingsar (RBC)*

**Anthony Ostrea (ADB):** We issued twice in CAD in 2023, a C\$500 million 5-year in May followed by a C\$1 billion 3-year in June for C\$1.5 billion in total. In 2022, we issued two C\$1.45 billion 3-year offerings.

### ANNUAL MAPLE ISSUANCE



Source: RBC Capital Markets

CAD is an important market for us, and we remain hopeful that it continues to stay constructive. ADB is a cost pass through bank so ultimately, our borrowers are directly affected by decisions we make in the funding market. As such, we have always had an eye on the after-swap cost of issuances in all markets versus what we can achieve in USD. I think the flexibility that we have in terms of being able to issue across the curve, including the short end such as last year, allowed us more shots on being able to maintain a presence in this market.

**CAD is an important market for us, and we remain hopeful that it continues to stay constructive. [...] We will definitely continue our commitment to the CAD market going into 2024.**

*Anthony Ostrea (ADB)*

**Daniel Wilson (RBC):** Can you see yourself being more active in taps in the CAD market, and as a result, coming to the market more frequently than twice a year?

**Anthony Ostrea (ADB):** OID has been an issue for us, not only in CAD, but in all non-USD markets, which prevented us from tapping our lines in these markets. We do not have any predefined targets for the number of times we will access a market in any given year. We will take whatever is there and is a function of investor demand and the after-swap cost as we are beholden to our borrowers.

**Jigme Shingsar (RBC):** Randy, you've been in this market very long and often. You were able to get a little more duration done this year. How do you feel about the market, has it lived up to your expectations? Do you see the underlying trend being positive and any comments on your experience so far?

**Randy Ewell (World Bank):** Yes, I do view the development to be very positive, we had the news about Canada housing issuance that was possible to be going away. We were whipsawed back and forth in terms of where that was going to finally land, but certainly even with the recent announcement that there seems to be space for SSAs to do more in Canada. We've had long-lasting success with Canadian investors. IBRD has been very active, regular issuer of CAD benchmark bonds and it's a very important market for us. I believe it's been 13 straight years that IBRD has issued large benchmark issuances in CAD.

---

**IBRD has been a very active, regular issuer of CAD benchmark bonds and it's a very important market for us.**

*Randy Ewell (World Bank)*

---

As you mentioned, in 2022, we got one trade done in January then the market seemed to have fallen away. That was a bit of a struggle, but this year we were very happy with the results when we issued the 5-year in January, then we were able to tap that by another C\$900 million with additional demands that we were aware of, then we were able to do a C\$1 billion 7-year print. Those are the sorts of trades that we love because we are very duration focused. This year, we've raised C\$3 billion in CAD, previously we've raised as much as C\$4 billion and we intend to stay very active. We also have IDA that is closely looking at the CAD market as potentially a new currency for its funding program. IDA has done 5 currencies so far, and CAD is one that we are closely considering to expand IDA's funding program.

**Jigme Shingsar (RBC):** Thank you Randy. Andre, can you share your experience in the CAD market and how you feel the market is developing in terms of the investor base and what you'd like to see?

**Andre Delgado (IADB):** CAD has been historically an important currency for us, and we have been regularly active in that market this year. We were happy to launch two transactions in around the 5-year sector with a total of \$1.25 billion Canadian dollars issued. Both trades were done in SDB and were very successful trades. We benchmark ourselves against the U.S. dollar curve. For any currency that we issue that is non-U.S. dollars, we look at a cost perspective versus U.S. dollars. We saw opportunities to offer value for CAD investors in 2023, and we hope that this trend will continue next year. We have also been paying close attention to developments around the CMB program. With the expectation that the net supply of CMBs will be reduced in the market going forward, we will look

for opportunities for maple issuers like us to fill the gap. The CAD SSA market is a market that has been relatively constant over the years, and it is of strategic importance for us. In terms of duration, we target a 4–6-year average, aiming to keep a curve in the market and the CAD market allowed us to achieve that. We will definitely continue our commitment to the CAD market going into 2024.

---

**For any currency that we issue that is non-U.S. dollars, we look at a cost perspective versus U.S. dollars. We saw opportunities to offer value for CAD investors in 2023, and we hope that this trend will continue next year. [...] With the expectation that the net supply of CMBs will be reduced in the market going forward, we will look for opportunities for maple issuers like us to fill the gap.**

*Andre Delgado (IADB)*

---

**Jigme Shingsar (RBC):** Thank you. Any comments from EIB in terms of your experience recently? You've got a long-standing presence in CAD as well; do you see any changes on that front?

**Jorge Grasa (EIB):** CAD is an important market for us, as we are a diversified currency issuer. CAD market is probably 1 of our top 5 markets by volume: some years there are more opportunities to issue and this year the Bank was able to do one transaction - a new 5-year C\$700 million offering in June, which was positively received by investors. We see Canadian investors as very sophisticated investors and we are always happy to be present in this market. We hope that in 2024 we will be able to do a bit more, and that we can bring longer maturities to the market, for example a 7 or/and 10-year. Pricing currently does not look too attractive compared to other markets, but hopefully there will be some opportunities along the year. The decision to launch in ESG format or "plain vanilla" format, depends on the needs for ESG bonds internally and the pace of disbursements to eligible projects.

---

**We see Canadian investors as very sophisticated investors and we are always happy to be present in this market.**

*Jorge Grasa (EIB)*

---

**Jigme Shingsar (RBC):** Great. EIB did some preliminary work quite a few years ago in CORRA, and we've seen that market develop here. Is that a format that you'd be open to issuing as well?

**Jorge Grasa (EIB):** Indeed, we did a first test trade back in 2019. As long as there is enough demand, it opens to a new class of investors that are interested in FRNs, and pricing is similar to a Fixed Rate Bond, we could definitely look at CORRA. It would be nice to issue a C\$1 billion CORRA trade.

**Jigme Shingsar (RBC):** Excellent. I briefly mentioned the average duration this year was a bit longer. Randy, you mentioned that duration is something that you want to focus on. What do you think is the biggest impediment to going further out of curve as far as CAD goes because you obviously spent a lot of time talking to investors around this very topic.

**Randy Ewell (World Bank):** It's just really the cost back to USD. Of course, when you go longer you have the provincials issuing, then you have the spread to Ontario, which becomes a little bit more complicated. It is a project that we would certainly love to try to make it work so we can only hope that in the future the stars align. The 7-year issuance worked well and lined up nicely for both investors and IBRD from a cost perspective, but those opportunities come and disappear quickly, so we must stay on top of the CAD market.

**Jigme Shingsar (RBC):** In terms of benchmarking to your USD curve, do you view this as enough of a strategic market that you have some flexibility around the levels versus USD within reason? Is the diversification in the market important enough that you have some flexibility to look at a cost benefit on that?

**Randy Ewell (World Bank):** We don't have a rule about that and certainly we won't stray very far from our USD curve, but we do aim to have a strategic presence in markets overall. For us it's very important to also have a diverse investor base across markets. We have some tolerance of what we can do versus our USD curve, but overall, we aim to stay strategic. We have spent a lot of time working on optimizing hedge costs back to USD hedges, and in some markets, it really is the factor that makes or breaks a trade for us in non-USD markets.

**Jigme Shingsar (RBC):** Thanks Randy. Similar question EIB, in your case, you've got in some ways the ability to look at both your USD curve and your EUR curve, which you maintain equally. How do you benchmark your CAD issuance? Is it versus your EUR curve or do you have some flexibility?

**Jorge Grasa (EIB):** Our primary focus will be the USD curve as the investor overlap is mainly with EIB's USD issuance, but as we are mostly a EUR borrower, we have to keep an eye on the EUR curve too. We decide to access the market on a case-by-case basis.

**Jigme Shingsar (RBC):** Any comments from ADB? You mentioned it was important, do you have some flexibility in looking at this market?

**Anthony Ostrea (ADB):** We have been fortunate enough such that our issuances in the past have been competitive to USD. If there

comes a point where the relative cost versus USD is an issue, we will assess it on a case-by-case basis and look at the broader portfolio of funding opportunities where the arbitrage versus USD is better.

**Jigme Shingsar (RBC):** Andre, I think you've looked at it. You did your first benchmark Sustainable Development Bond in Canada. How much flexibility do you have, or do you value the diversification enough to have at least some minimal flexibility amount relative to costs?

**Andre Delgado (IADB):** We've been looking into the all-in cost back to USD, but we also look to achieve a balanced issuance mix. Diversification is important for us, and we look at the maple market as a key strategic market. It's always desirable in strategic markets to keep a presence in front of the investors and have a current curve as well. So, we factor out all that and try to be consistent and regular. I think it's important for investors that we have regular issuances in the market and that's part of our decision-making process. We try to strike the right balance between these two aspects: The cost basis comparing to USD and the impact of diversification that we value very much as well.

**Jigme Shingsar (RBC):** Great, that sounds very clear. The last topic that I mentioned in our agenda was secondary market liquidity. All the issuers on here are essentially top tier issuers who are considered not just because of the credit quality, but also in terms of market perception and liquidity. Randy, you've spent a lot of time with investors up in Canada, and in fact you are here now, as with Andre. When you speak to investors, what are you hearing regarding the secondary market liquidity for Canadian SSAs and your bonds in CAD in particular? Is it improving or a concern?

**Randy Ewell (World Bank):** For those who have been buying us for a while it's not a concern for them. I think they're happy. But as we've sought to broaden the investor base, and we approach the investors who are considering SSA exposure, we do occasionally get questions on liquidity. We've also noted that not all dealers are SSA secondary numbers, so we continue to push them to market SSAs more. But for the most part those who buy IBRD are happy with the product and don't question liquidity, we work with the dealers to try to see what can be done in terms of information flow to make that a little better.

**Jigme Shingsar (RBC):** Thanks Randy. Andre, is your experience similar to Randy's? Your long-standing investor base has an idea of what they expect on liquidity and therefore are prepared for that, but what about new investors?

**Andre Delgado (IADB):** Our experience is similar to what Randy mentioned. Sounds like liquidity is less of an issue in CAD markets than in other markets. Also, we have the impression that our bonds are usually very well placed, and the secondary market activity is usually limited. It's not non-existent, but it is limited and in smaller sizes and clips as compared to other markets. We as an issuer can help improve liquidity through larger outstanding amounts, which could be done through tapping, and always ensuring strong

support from our underwriters in the secondary market. Ultimately, we believe that this should address any issues and concerns from investors. That said we haven't heard anything in terms of liquidity from Maple Market investors.

**Jigme Shingsar (RBC):** That's good news. Any comment from EIB on that?

**Jorge Grasa (EIB):** From discussions with investors, secondary market liquidity doesn't seem to be a big concern. We have never really got any questions on how we are trying to improve secondary market liquidity. Our bonds are well placed, but if investors do want to sell, there are always dealers willing to trade them.

**Jigme Shingsar (RBC):** Right. Anthony, you did a roadshow across Canada recently. Anything to add to the comments that have been made on liquidity?

**Anthony Ostrea (ADB):** Nothing material basically the same comment. Investors have commented that liquidity has actually improved compared to years ago. If you look at the offer side, liquidity has been constructive given regular SSA issuances. And on the bid side, that's also benefiting from a wider dealer community and investor base.

**Jigme Shingsar (RBC):** Great. Thank you unless anyone's got any other comments on CAD, why don't I move on to this last catch-all question. Do you have any particular concerns looking into 2024? We've been through a lot of volatility, there's a lot of elections next year, obviously potential for market dislocation. Why don't I start with Andre, any particular concerns as we head into the new year?

**Andre Delgado (IADB):** Ideally, we would like to see less volatility in the market. I think that's a function of interest rates across the globe going up too fast. Markets took some time to adjust and to find stability. Given the increase in volatility, this has been a challenging year in many markets. Another topic is the competition for capital and consequently for the issuance windows. The windows have been shortened as more economic data releases gained relevance due to the uncertainty. As more economic data releases have the potential to create volatility in the market, this reduced the number of windows available. At the same time, everybody is issuing a little bit more. The main challenges in 2024 will be similar to 2023. Hopefully volatility and pipeline will be more manageable.

**Jorge Grasa (EIB):** In previous years the market was more focused on certain topics that created heightened volatility during the year. But this year, I would guess that everybody is already thinking that the fight against inflation is done, and central banks will start tightening as soon as the first or second quarter in 2024. There seems to be nothing of concern right now and let's hope for no surprises that could increase volatility in 2024.

**Anthony Ostrea (ADB):** Echoing the comment on the issuance windows, we saw a stat about how issuance windows have been

declining over the past several years so one needs to really be nimble and flexible. The ability to diversify and obtain cost-efficient duration in the public markets are our largest concerns next year. I don't think access is an issue, but it really boils down to pricing across markets and tenors.

**Jigme Shingsar (RBC):** Thank you. I want to thank our panelists, your support of RBC and the Canadian dollar market is very important to us. Thank you again for sharing your thoughts. I will follow up with regard to transcripts.

**Randy Ewell (World Bank):** I think it's already been said by the other panelists. Whether some investors are increasingly more opportunistic I don't know, but there are indications that some investors that had been sitting on the sidelines during the hiking cycles may be returning. It feels like there is some growing sentiment that the market may have reached the peak of its hiking cycle. How quickly that happens, or whether rates will remain higher for longer remains to be seen, but I do feel like investors have become more comfortable to put cash to work. Panelists here have already spoken about the difficulty of finding good issuance windows in a backdrop of volatility and with growing funding programs. I can attest it has made things very complicated. Hopefully there's a bit more stability next year and we don't have to wrestle each other for too much for execution windows.

---

**Our issuance continues to be heavily oversubscribed, particularly so in Climate and Sustainability Awareness Bond formats. Outperformance continues in the secondary market, where sustainable bonds are generally bid. This highlights the interest of investors.**

*Aldo Romani (EIB)*

---

**Aldo Romani (EIB):** While there may be good reasons to end this roundtable on a word of concern, as a naturally born optimist, I would like to invite to look forward and always for opportunities rather than difficulties. Our issuance continues to be heavily oversubscribed, particularly so in Climate- and Sustainability Awareness Bond formats. Outperformance continues in the secondary market, where sustainable bonds are generally bid. This highlights the interest of investors; not only green investors, but also investors that see these bonds perform well. It is a favourable dynamic for the distribution and trading of these bonds.

One wish I also think worthy to conclude these remarks with is the "Kantian shift" of the capital markets that Christine Lagarde mentioned in a recent speech. She referred to the philosopher's famous idea that you are supposed to do the right thing simply

because it is right. “Aus Pflicht”, as they say in German. It is clear that for effectively acting in this way you must operate from a basis of goodwill. This is something that we should wish ourselves generally, and can certainly praise the European Union for in its pursuit of an efficient capital markets union at the service of sustainable development. There are excellent opportunities for a structural engagement in this area, and I really wish that this can benefit us all.

**Jigme Shingsar (RBC):** Great, thank you all very much for continue to support this roundtable, supporting RBC, and the Canadian market. Just going back to the discussion around secondary market, liquidity, et cetera, I think if we can continue to find a collective way to get more issuance into this market, I’m sure that will also enhance the liquidity and help Canada live up to what I’ve described as a semi strategic market for all of you. Thank you again for sharing your thoughts.

# Municipal Treasurers Roundtable



## ISSUER REPRESENTATIVES



**Matthew O'Rae**  
Chief Financial Officer,  
Municipal Finance  
Authority of BC



**Christine Dacre**  
Chief Financial Officer,  
TransLink



**Patrice Impey**  
Chief Financial Officer,  
General Manager of Finance Risk  
and Supply Chain Management,  
City of Vancouver



**Craig Dyer**  
a



**Laura Mirabella**  
Commissioner of Finance and  
Regional Treasurer,  
Region of York

## MODERATOR



**Mansoor Khan**  
Director, RBC Government  
Finance

## MUNICIPAL TREASURERS KEY THEMES

1

**Cautious Outlook:** Municipalities are approaching the 2024 budget planning process with higher inflation cost, affordable housing and social services expense top of mind. 2023 spendings have been generally on track with anticipation of a modest FY surplus. Ridership surprised on the upside which boosted revenue, though how to fund affordable housing under higher inflation driven costs remains a major concern into 2024. The uncertainty on Bill 23's trajectory continues to pose additional burden for the municipalities.

2

**Inflation Cost:** The most critical factors on the operating side are cost inflation and expense related to social programs, which persisted throughout 2023 and are expected to continue into 2024. Development expense, facility operation and maintenance costs have risen significantly due to surging inflation. Furthermore, Social services such as police and fire department also experienced heightened demand fueled by a combination of mental health issue, addiction and homelessness.

3

**Housing:** Affordable housing has remained a focal point this year with persistent gap between buyer and seller pricing expectations. In response, municipalities have boosted their investments in housing -related infrastructure during 2023 to meet affordable housing goals. However, as inflation eroded purchasing power, municipalities are seeking additional funding from senior government for a more comprehensive housing accountability structure. The municipalities foresaw a positive trajectory as all 3 levels of governments are concentrating their efforts on this issue.

4

**Transit:** Transit fare revenue has been the most variable compared to budget. Ridership surpassed expectations in 2023 and even exceeded pre-covid level in some regions, generating extra revenue which provided additional financial flexibility. This momentum is expected to carry into 2024 on the back of population growth. Meanwhile, parking revenue remains below pre-covid level. The municipalities are also developing housing alongside transit hubs to enhance efficiency and support expansion demands.

5

**Borrowing Program:** Canadian municipalities continue to offer investors attractive value relative to other government credits as local governments must balance their operating budgets. There was a total of C\$2.8 billion Canadian municipal issuance in 2023, moderated from the C\$4.4 billion in 2022 and the record high of C\$5.9 billion in 2021. Issuers sidelined under rising interest rate environment and sufficient pre-funding during covid. Large Canadian municipal issuers are expected to continue to focus on 10-year, 20-year, and 30-year bullet maturity issuance, while smaller municipal issuers are expected to issue via 1-10 year and 1-20 year serial debenture issuance.

6

**ESG:** ESG continues to be an integral part of the business for municipalities given the nature of the funded capital projects. While some issuers have issued labeled sustainable bonds, others aspire to potentially issue these in the future. The Sustainable bond issues were very well received and while the pricing benefit was marginal given the challenging market backdrop globally, the demand from investors with specific ESG mandates was instrumental in the success of these transactions.

## MUNICIPAL FINANCIAL & ECONOMIC UPDATE

---

**Mansoor Khan (RBC):** Thanks everyone for joining. My name is Mansoor Khan and I am a Director in the Government Finance team here at RBC. I would like to start by introducing our esteemed panelists with us today. I will start off with Craig Dyer, CFO at the Region of Waterloo, Laura Mirabella, Commissioner of Finance and Regional Treasurer at Region of York, Matthew O’Rae, CFO from Municipal Finance Authority of British Columbia (“MFABC”), Christine Dacre, CFO at TransLink, and Patrice Impey, CFO, General Manager of Finance Risk and Supply Chain Management at City of Vancouver. I’d like to welcome all of you and looking forward to our discussion today.

I’ll start off with a question on financial performance for each of the issuers and perhaps will ask Laura first to share an overview of the financial performance of the region in the last year?

**Laura Mirabella (York):** 2023 was the first year of our multi-year budget, we do a 4-year budget that is aligned with the term of council. It was passed in February of last year, provided for about C\$2.9 billion of operating spending and close to C\$1 billion of capital spending. Our projection for this year is we will spend about 96% of the operating budget, and about 90% of the capital budget. We have had inflationary pressures obviously, just like everyone else in the market, but we’ve been careful about applying fiscal discipline. At this point we are expecting to finish the year at or below budget.

**Craig Dyer (Waterloo):** Being the first budget of this term of council, like Laura, we approved it back in February. Overall, we’re tracking very close to the 2023 budget, with a fairly modest surplus projected for year-end, both on the tax side, and on the water and wastewater side. There’s a couple of notable items that we’ve been monitoring over the course of the year.

From a revenue perspective, where we’ve seen the most variability as compared to budget is our transit fare revenue, we’ve had a significant recovery in our transit ridership, and that has generated additional revenue for us over the course of this year, providing a bit of offset to few areas on the spending side.

Our facility operating and maintenance costs have risen significantly, largely from an inflation perspective, and we probably understated our budget a little bit in 2023. More importantly is that our development charge collection regime provides a discount on development charges for industrial development. We’ve had some significant industrial developments over the course of the year, meaning that the cost of those exemptions has increased. Overall, we think we’re going to be in a small surplus position. Water and wastewater rate revenue are both projecting to be slightly above budget, as well as some operating savings.

**Patrice Impey (Vancouver):** On the operating budget side, for 2023 we are looking to be within budget with a bit of a surplus, and we

usually transfer the surplus to our stabilization reserves. Our biggest challenges were still from COVID, causing several impacts on our revenue streams. In some areas, particularly downtown, we’re still seeing fewer people coming back to work for fewer days a week, so those parking revenues have not come back to their pre-covid levels yet, while most of our other revenue sources have.

On the expense side, we’re seeing pressures in our public safety police and fire and rescue areas. There were investments by our council in the 2023 Budget to increase staffing, but until all the staff goes through the full training, they are still short staffed at some levels. We’re paying a little bit more in overtime, but that’s offset by vacancy savings. The market for recruitment is still challenging so vacancies are lasting a little bit longer, but otherwise we are on track on the operating budget.

On the capital budget side our challenge this year is cost escalation. We had our capital budget approved last summer which was prior to this new Council term, and we’re already seeing that some cost estimates are not sufficient. We’re looking at how can we prioritize some of our work and adjust the scope to address the cost escalation. On the flip side, there’s been more support from senior government funding in several areas, which helped us to build up our capital plan. We should be spending in line with our target at around 90% of our capital budget, and we will be a little bit lower than that this year. Being the first year of the capital plan, we’re getting things started but are ramping up our delivery quite quickly, as we have an aggressive capital plan for the next 4 years.

**Christine Dacre (TransLink):** TransLink’s revenue this year is above budget, which is driven by higher transit revenue as well as investment income. Our fuel tax revenue is a bit lower, but that’s mainly because of a prior year adjustment that came through. Otherwise, it would be tracking on budget. We’re managing our costs closely; our operating expenses are holding despite the increasing inflation cost and labour cost - which has seen a significant increase. Our financials include a commitment from the province of BC for additional relief funding of C\$479 million which will be received in 2024 and 2025, but we recorded it this year due to the accounting rules. Excluding that funding, we’re forecasting a C\$21 million surplus.

On the capital side, we have been lowered in spending, largely due to the market backdrop - the supply chain, labour market, getting contracts signed, and getting people in to do the work. So, it is slower on the capital side. Other than that, we’ve been pleased about how the year is going.

**Mansoor Khan (RBC):** Matt, from your perspective, how have the MFABC members fared financially? Are there any interesting trends that stand out for you?

**Matthew O’Rae (MFABC):** I won’t comment too much on 2023 due to the way we collect the aggregate municipal data in a one-year trailing fashion. You heard a little bit from Christine and Patrice on how 2023 has been shaping up for transit for the largest city in the province. I think the positive to some of those challenges is that MFA and Local Governments in BC went into 2023 in a relatively strong fiscal position. Year over year own source revenue and total revenue was up 6% and 8.5% respectfully across the entire municipal sector in the province, while total expenses were up 7.8%.

On average there is a modest surplus across the municipalities going into 2023. They went in with a strong cash and investment position, which had grown significantly over 2021 and 2022. Currently they have just under C\$20 billion of reserves in cash and investments, and total debt was up 6.5% in the sector as well. I think that’s been a message that we’ve talked to rating agencies. There were certainly some challenges in 2023 as a lot of people already alluded to, but the Province of BC is in fairly good shape going into some of these tougher decision points.

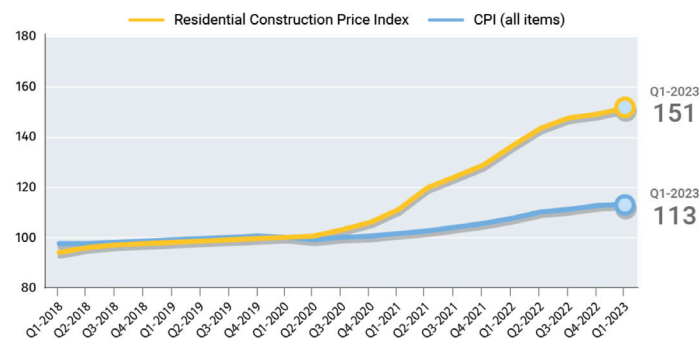
**Mansoor Khan (RBC):** Going back to Craig, you mentioned inflation, and I think that’s been a key topic of discussion this year. Do you see this higher level of inflation continue to impact the region going forward? There has also been a lot of talk around potential economic slowdown and the need for support on social programs. What kind of pressure is that putting on the Region’s operating budgets?

**Craig Dyer (Waterloo):** While the focus tends to be on the headline CPI, which is obviously coming down and is helpful, we’re actually more concerned about the extended period of elevated capital cost and non-residential construction inflation. It was in the double digits for a couple of years, and even though it’s down to around 6% now, that’s still 6% on top of last year’s 15% and on top of the previous year’s 12%. Trying to keep up with that in terms of our capital funding has been an immense challenge.

Finally, when I think about our federal and provincial counterparts, the funding that’s made available to us in a number of areas is simply not keeping up with inflation, whether it’s provincial funding for public

**GROWTH IN CDN RESIDENTIAL CONSTRUCTION PRICES SURGE PAST CPI**

CPI (all items) and Residential Construction Price Index, indexed to 100 at Q1 2020



Source: Statistics Canada, RBC Economics

health programs, or the inflation factor that’s attached to the Canada Community-Building Fund. Inflation diminishes our purchasing power, what we could invest in 3 or 4 years ago from the Canada Community-Building Fund relative to what we can do now has diminished significantly. Therefore, those 2 factors are the main drivers of our 2024 budget.

**While the focus tends to be on the headline CPI, which is obviously coming down and is helpful, we’re actually more concerned about the extended period of elevated capital cost and non-residential construction inflation.**

*Craig Dyer, Waterloo*

**Laura Mirabella (York):** Craig covered it. We are finding that there is continuing pressure on our Community and Health Services department. Last year, Council provided an additional allocation for them because we are seeing increased costs and needs in the community as York region continues to urbanize, and demographic changes were really outpacing the natural growth in our overall revenues.

Our Ontario Works cases went up by 23% in the first 4 months of 2023 and that has trickled effects throughout our social programs. Our public health services still have a little bit of a hangover from COVID, we are trying to catch up with some of the proactive public health work that was put on pause through the pandemic which has been creating a bit of a double whammy of pressures.

**Our Ontario Works cases went up by 23% in the first 4 months of 2023 and that has trickled effects throughout our social programs.**

*Laura Mirabella, York*

We have pressures in our policing services as well, with community demands adding costs and staff to police that outpace what we expected in the growth of our tax levy. Those are the big pressures on the operating side. On the capital side, as Craig said, it’s always been inflation. What we find is that for a given capital budget, there are less projects that can be completed. Projects are being delayed because procurements are coming back, and costs are doubled on what the original budget had been. So, we’re going back out to the market again, rejigging budgets and scope which slows down our capital program.

At the same time, there’s immense pressure to ramp up our growth capital program so that we can get the housing enabling infrastructure into the ground as quickly as possible, for our local

communities to meet their housing targets. For our friends that aren't from Ontario, the provincial government has set housing targets for most of our local municipalities and so there's huge pressure on the region to get that water and wastewater infrastructure into the ground as quickly as possible, and that is creating inflation in our capital program from my perspective.

**Mansoor Khan (RBC):** I want to dive a little bit more into housing shortly because that's obviously a key discussion point as it relates to municipalities, provinces and at the federal level but before we do that, Patrice, over to you for your observations.

---

## We're funding resources for our police department to address this issue that is impacting every major city— a combination of mental health issue, addiction, and homelessness.

*Patrice Impey, Vancouver*

---

**Patrice Impey (Vancouver):** We just published our draft 2024 budget on November 21st. The driver on the operating side is inflation, we're considering just our status quo budget, which is not increasing service levels significantly, but just the cost on providing the services that we currently have. The inflation on our costs is around 6%, a lot of that is driven by collective bargaining where many of our unions contracts were up, so seeing higher rates than we have seen in the past. But certainly, the impact of inflation, and the impact of the pressures other organizations are seeing which area charged back to communities. E.g., emergency 911 rates are up significantly. All of those are driving our core operational inflation. We are factoring in about 6% increase to fees, with some higher than that. It is a very different year from previous years that have had a low inflation environment, which was reflected in our budget. We have also added ~1% property tax each year to ramp up our infrastructure renewal.

On the social services side, the two areas we have significant investments on are firefighters and police services, including nursing mental health support services. We have seen an increasing number of fires; our fire and rescue service are being called much more frequently for medical calls including overdose calls, and our Council approved additional firefighters in this year's budget.

The other investment is increasing the number of police officers and mental health nursing services. We're funding resources for our police department to address this issue that is impacting every major city— a combination of mental health issue, addiction, and homelessness.

That's a pilot we started this year, and we'll be funding some of that again next year. We first re-prioritize work as needs shift in

all our departments rather than adding resources, but the major investments from a financial point of view is in police officers, nursing mental health support services from the health agency, and our fire and rescue services.

**Mansoor Khan (RBC):** Christine - from your perspective, are you seeing more pressure on wage agreements and material costs?

**Christine Dacre (TransLink):** Definitely very similar story as the others, especially on the capital side. We look at our 10-year capital program annually, and when inflation really started spiking, we challenged all the capital planning to make sure that we are prioritizing appropriately. We don't sacrifice our state of good repair or safety in any of our capital projects, and really take a hard look at those expansion ones – can we afford those right now? As you're probably aware we have a number of major capital expansion projects underway, those are not at risk at all. We are still moving forward on them, and we just must adjust and absorb those inflationary pressures.

---

## We are still moving forward on them (capital expansion projects), and we just must adjust and absorb those inflationary pressures.

*Christine Dacre, TransLink*

---

Material costs is another focus, the maintenance cost of our buses and SkyTrain system has increased above inflation. We're also still experiencing supply chain issues, so we are adjusting our order time significantly to make sure we're not caught short. Covid is no longer really a conversation for us, inflation, including labour inflation are really what is driving our labour rates. They're contributing a lot more to the funding gap and the real need for additional revenue sources to provide the same level of service despite the huge expansion needs in the region. The big topic is inflation and availability of getting labour and materials.

---

### CONSTRUCTION WAGE GROWTH SOARS OVER OTHER INDUSTRIES

Annual change to wages in 2022, %



Source: StatCan, CFIB, RBC Economics

## MUNICIPAL BORROWING PROGRAMS & FEDERAL POLICY

**Mansoor Khan (RBC):** Moving into borrowing programs, Matt, what are some observations you've seen from MFABC members as it relates to their borrowing behavior, and investing style?

**Matthew O'Rae (MFABC):** On the borrowing side, I'll end up repeating what has been said already, but it's been the quietest long-term borrowing year I've seen in a long time. Some projects have been delayed, rescaled or canceled. But the conversations about the borrowings that needs to get done are continuing. There's a lot of pent-up demand there, some projects can be pushed off, some may need to be rescaled to keep them affordable, but many critical initiatives must proceed.

It's a little bit of the rate environment driving where we see the money go with the inverted yield curve as a lot of people are piling into high interest savings accounts and money market products that we offer members.

*Matthew O'Rae, MFABC*

On the investing side, it's been a positive to our pooled investment products. We've seen just over C\$0.5 billion dollars of assets roll in year to date versus last year. It's a little bit of the rate environment driving where we see the money go with the inverted yield curve as a lot of people are piling into high interest savings accounts and money market products that we offer members. The source of increased investing is primarily attributable to the Province's C\$1 billion grant that they passed out to local governments at the end of their most recent fiscal year. Most recently though, we're starting to see members take on more duration with these favorable coupons as the yield curve is expected to normalize in 2024.

**Mansoor Khan (RBC):** Laura let's come back to you on housing, I'll start off with you and open it up to the rest of the panelists, what do you think the higher-level governments can do on housing from the municipal perspective?

**Laura Mirabella (York):** I think my colleagues would agree when I say that no one level of government can tackle this on its own. The problem is there has been a mismatch between the price of housing and people's ability to pay. So, we've got a housing crisis that people don't have good housing options, and yet we have a housing industry that has the ability and the willingness to wait when they don't feel they're getting the price that they want in the market. As a result, I think many municipalities, York Region included, is calling on senior governments to help us invest in deeply affordable housing.

We've got a housing crisis that people don't have good housing options, and yet we have a housing industry that has the ability and the willingness to wait when they don't feel they're getting the price that they want in the market.

*Laura Mirabella, York*

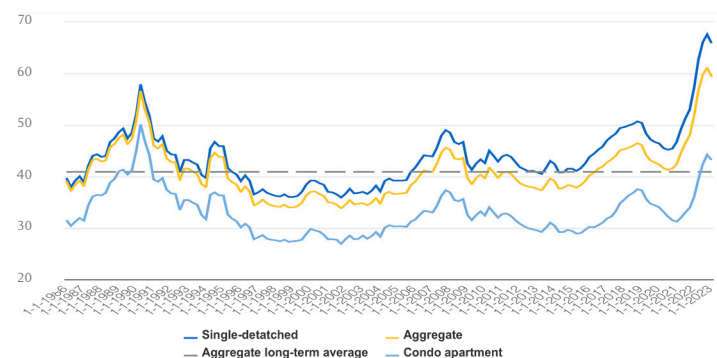
In the approved budget in February 2023, we had our highest ever capital plan – a C\$9.9 billion 10-year capital plan. It was heavily weighted toward growth related infrastructure or infrastructure that enables private market housing, water and wastewater infrastructure, roads infrastructure and alike.

One thing that had to be kept out of the list was deeply affordable housing, that regions have accountability for creating, to supplement housing options. We really need our provincial and federal partners to come to the table with funding. Municipalities cannot take on the full cost of that on their own. We're cautiously optimistic with what we've seen in the Fall Economic Statement with a lot more details to be worked out.

We're pleased to see a low-cost loan program that might help us incent private rental. The region has had an incentive program for developers to invest in purpose built rental for many years, but we've had very little uptake, partly because, even with our deferrals on development charges, it wasn't enough to make those projects economic for them. Some moves that the federal government has put in place in terms of removing the HST from purpose-built rental will hopefully help increase the pace of private sector investment.

### RBC HOUSING AFFORDABILITY MEASURES – CANADA

Ownership costs as % of median household income



Source: RBC Economics

We're really comforted to see the C\$1 billion that they've set aside to help municipalities investing in a low cost and affordable housing. There's a specific fund that's just to help co-op housing, it is going to be required to make a full court press to create a broad range of housing types. Municipalities must do our part in terms of investing in that water and wastewater infrastructure, and York Region is doing that by having a large capital program, but we really need our partners to come to the table as well.

**Craig Dyer (Waterloo):** On the ground we need additional funding being made available through the CMHC to help us support our new builds for that deeply affordable housing Laura was referring to. We need some stability in terms of rent supplement funding from the province. We need a recognition by the province through their Building Faster Fund that upper-tier municipalities who deliver the water and wastewater infrastructure are going to be eligible for funding under those programs.

From a philosophical perspective, I think we need a conversation about what a new fiscal relationship looks like, something that clearly sets out what municipalities are responsible for and gives us the revenue tools to pay for them. Because there is no issue that our council has talked about more in the last couple of years than affordable housing, housing affordability and homelessness. We simply can't solve those problems using the property tax. Something must give, and we need to have some additional tools to help fund these programs.

**Laura Mirabella (York):** I'm going to build on Craig's comment, in Ontario, the Association of Municipalities of Ontario, which both Waterloo and York regions are a part of has now formally called on the province to come to the table, and help us create a new framework for prosperity that would take a look at what is the fiscal accountability of municipalities vs. the province, and how we can work together to provide sustainable public services, in a way, that's fair to all taxpayers.

**Patrice Impey (Vancouver):** In BC, Vancouver particularly, has been in the housing crisis for a decade now. That has expanded to the rest of the of the country and we have more federal attention on it, which is good as it's not a problem that you can control within a municipal boundary, as it is structural and it's economic. In our strategy that we developed a number of years ago, just as Laura was mentioning, cities can regulate, but they aren't responsible for affordable housing. Therefore, that's where we needed senior government funding. We have had some support on that and some progress through the BC government. In the past we had lots of higher end condo development, which funded a lot of infrastructure, but those aren't the units that we need for the population. We will need a lot of changes to build housing for the missing middle.

In past years, the City used both regulatory and incentive-based actions for rental development. Last year, the city approved more rental units than condo units for the first time ever. We've seen

that switch happening and the developers are moving to rental. We've also used density bonusing where it's affordable rental. There's a lot of regulation that the city has put in over the last years.

These changes are impacting very much the financial structure for development in municipalities. We've been advocating for municipality finance reform for a number of years with the BC government. We're at the point now where everybody does need to see some structural rather than one-time change on how municipalities are structured and are funded.

---

**It's a very unique time when all three levels of government are looking at it, which is great, so I think we have a good opportunity to make some really step changes over next little while.**

*Patrice Impey, Vancouver*

---

We also have targets from the province on growth. The province recently set out a number of new housing statues around development and transit across BC. There're new standards around amenity and development charges, and those will be standardized around the province. All of that is going to be much more formulaic, and that's going to set up a whole new structure around municipalities in BC, to require density in some areas.

One of the biggest challenges is when we work around the missing middle and the lower rental income, we don't generate amenity revenue, so the funding formulas don't work. We won't have the funding we need for amenity growth, such as new sewers, water, fire halls, parks, community centers etc. We're really looking for the senior government to change the model, where they will also fund the utility and basic core infrastructure in order to enable the affordable housing development. Vancouver has been on this path for a while and very open to density, but we now need to deal with the financial structure and what's right for municipalities and provinces in order to support that level of growth. It's a very unique time when all three levels of government are looking at it, which is great, so I think we have a good opportunity to make some really step changes over next little while.

**Mansoor Khan (RBC):** Building on this topic of the relationship with the higher levels of government and what they can do, we've heard about the dissolution of the Region of Peel. There were obviously further questions being asked about the other regions from investors. I'm curious to hear your thoughts and your first reactions to that announcement, and how you see things going forward and if there's any risk, particularly to the Regions of Waterloo, and York.

**Craig Dyer (Waterloo):** When the original announcement indicated that facilitators were going to be appointed to review the various regions a year ago, that created for us a sense of uncertainty. In our 2-tier structure we felt this both in terms of the upper and lower tier politics, as well as our ability to recruit and retain people, which is a challenge when there's uncertainty around the future of your existence. Now that the notion of facilitators has been abandoned and the discussion has been referred to the Standing Committee on Heritage, Infrastructure and Cultural Policy, from my perspective, this simply extends this period of uncertainty.

We have a new minister, and we're looking for some clarity from that minister about what the future of regions looks like and what the changes that they're proposing through Bill 23 look like. It's a bit hard to imagine a similar decision in Waterloo Region. We have we have a combined population of ~650,000 people, and my own personal view is that I think there are more opportunities from a consolidation perspective than there is from a perspective of dissolution.

**Laura Mirabella (York):** I think Craig speaks the truth when he said that when the initial announcement was made, it created a lot of uncertainty and discomfort amongst our staff, as similar rumors might in any sector of the economy. I think that our CAO at the time said that the work that regions do is necessary and important. The corporate structure within which it happens is a little less important, as maybe at some point the name on your paycheck will change, but the work that you're doing is quite likely to continue. Obviously, whenever there are dissolutions or consolidations there will be some movement and disruption, but I think that the other thing is that it has been dragging on and has now been referred to a legislative committee. We know that the committee will be looking at all the other regions, including Waterloo and York regions sometime over the next little while. When I observe what's happening in Peel, I really do think that it's a unique situation. They are a Region of close to 1.3 million people right now and the large majority of that is within the 2 municipalities: Mississauga and Brampton. They are each about double the size of our largest municipality among our 9 municipalities in York region, so they may have a unique circumstance there. I often say that regions in Ontario enjoy economies of scale, particularly in respect to the large-scale infrastructure that enables growth in our local municipalities. I happen to think that a regional structure, or a structure that takes care of that infrastructure over a much larger geography, makes a lot of sense for both operational and practical reasons, as well as for financial reasons. I can't imagine a situation where 1 of our 9 municipalities is having to negotiate with multiple partners about how to get hookups to water infrastructure and wastewater infrastructure, so the regional structure really helps with that. I don't see it as something to be incredibly worried about in the short term. I think the reality from the perspective of where we are in the provincial political cycle makes me think that they're doing Peel as a bit of a pilot, and that they're going to see how that works out, how that dissolves, how that operates post dissolution, and then maybe marry that with the other findings of the standing committee where we may see some changes at the regional level perhaps after

the next election. I'm not thinking that we're going to see a lot in the very short term. For us, it's status quo. We're continuing to support each of our local municipalities - most of them have got ambitious targets that require lots of growth-related infrastructure, and we are working on putting plans in place to build all of that as quickly as we can build. It's difficult to build everywhere all at once in a fiscally sustainable way, but we are working on that, and we'll continue to work collaboratively with our local municipalities over the next little while.

**Mansoor Khan (RBC):** Christine, in previous years you've always talked about the support that you've been receiving from the provincial level of government due to the pandemic. From your perspective, what are you seeing as it relates to the current support from the provincial government, and how would you characterize the relationship with senior levels of government?

**Christine Dacre (Translink):** During COVID, we were very happy to get the support that we did both from the provincial and federal governments. In March, this year the Province of B.C. committed to an additional C\$479 million for TransLink. This was to help cover 2024 and 2025 years of our investment plan, and really covered the inflationary pressures we have seen over the last two years. Transit in our region is extremely important and we have support from both the local and provincial governments. It is critical for our economy in the region, and we have commitments from them to look at what our future funding situation is. You're all aware that everyone is moving to electric vehicles from gas and diesel, and part of our funding is a fuel tax revenue. That is going to decline over the years, but we don't know how fast that will happen. We also need another revenue source because the cost of running our system and making the expansions in the region that is needed are significant. The province is committed to working with the mayor's council in finding additional revenue sources. We are also in conversations with the federal government regarding the permanent transit fund that is set to come out in 2026 and looking to see if the delivery of this fund can be accelerated by two years.

---

**Our ridership is increasing, which is good, but how long inflation stays up is a factor.**

*Christine Dacre, Translink*

---

**Mansoor Khan (RBC):** To add on to that, looking ahead as you plan for next year what would you see as the key financial challenges? Would like to hear from others as well on this after.

**Christine Dacre (Translink):** Our ridership is increasing, which is good, but how long inflation stays up is a factor. I think inflation will continue to be a concern. Our revenue sources other than fuel tax revenue are solid and are increasing, it's on the expense side

due to inflation and expansion that we need a new revenue source. We have significant demands in our region for expansion, so we have put a plan in place called “Access For Everyone”, which is the next set of expansion projects that everyone is very anxious to see. We need to start the planning of those projects and start getting ready so that when the federal funding is available or when other senior government funding is available, we’re ready to get going on them. Before COVID it worked very well for Translink when the federal government had funding programs for the transit agencies and municipalities across Canada. We want to make sure that we continue to do the work we need to do, to get ready for the future that is drastically needed in our region. On the comment about transit hubs, we’re working very closely with our policy makers, and it is very important to make sure that the housing developments are along transit hubs because that’s where it’s needed to be more efficient and effective as a region.

**Matthew O’Rae (MFABC):** Wage negotiations, labor shortages, construction inflation, housing and homelessness and drug addiction are big ones that we’ve heard. The housing initiatives and policies will be a big one. Additionally, I think the increased interest rate environment will also have an impact, although by historical standards, these aren’t high. I think many people were hoping rates would come down sooner than they are and get back to some of their projects, at more affordable funding levels.

On housing, I think pressure from senior levels of government to boost housing stock is a good thing. Patrice commented about all 3 levels of government being focused on it and I think that’s fantastic. I have not yet dissected the fiscal update last night, but the removal of the taxes at the Federal level for new apartments is positive. One of the things that I’ve observed are the conditions around the senior government funding to support that development, and how everyone’s trying to work together. Very recently, we observed a planned announcement from the accelerator funds by the Federal government for two Metro regional areas, being put on hold. Considering those regional districts proposing to use DCCs to fund infrastructure upgrades caused by the proposed increase in housing stock to follow. The message is clear from the Metro regional districts publicly, that growth needs to pay for growth in the system. That is going to be interesting to watch how those relationships evolve but I believe everyone’s committed to solving it. As Laura alluded to, it’s going to take all 3 levels of government to make a dent in this problem. So, I think it’s going to be key that they all come together, compromise and move initiatives ahead.

**Patrice Impey (Vancouver):** There were some changes to the regional charges in Metro Vancouver. Regional organizations are responsible for sewer water treatment etc. across the region and cities pay for that through our water rates. The municipalities are then responsible for all the sewer and water utility within it. We each have our funding sources, but there’s a lot of coordination that has to happen because property as we talked about before has market revenue and a cost, and if it doesn’t make sense, things won’t get

built. All of these are a delicate balance to make sure that we get the right model so that developments move ahead, but there’s enough money to fund the infrastructure that needs to be funded. The little bump in the road with our region was that they increased their rate significantly in a very short period of time. Developers are going to look at their pro forma and say, I can’t afford to build now because the cost is so much higher, so it takes a little bit of implementation and how we need to get there. Managing the development so it doesn’t get stifled in the short term is important because it comes down to what people and developers pay for land and the lands they have already acquired. They have a lot of fixed costs, so increasing development charges impacts the viability, and over time it’ll happen in general because rates have gone up. That was the big challenge, and the federal government is removing the GST on rentals, but then if the costs go up, we don’t know if the pro forma is going to work on those developments. I don’t think anybody disagrees that growth needs to pay for growth. The theory behind growth pays for growth is that developers will pay less for the land because they know what the market and cost is, and that’s what they’ll pay for land, but that takes a while before that works its way into the land costs. If there are too many changes immediately, it might impact the ability to develop, or the ability to collect enough revenue to fund water and sewer. That’s where the municipal finance reform that we talked about comes in, where you’re putting in development and the revenue isn’t going to support the structure we had before around development cost levies. Senior government funding that can help when we’re building density that’s targeted to a lower income level, or rental versus condos. It needs to be a different model than the traditional high-end condos which can spin off the funding to build the infrastructure. The timing and how it gets rolled out is another piece that should be part of that as well.

**Mansoor Khan (RBC):** Matt, did the development charge changes impact MFABC’s borrowing? The request for new loans was low compared to what you’ve seen historically. Do you think that contributed to it this year and would you expect that to continue into next year as well?

Matthew O’Rae (MFABC): Maybe marginally, but I don’t see it having a material impact on borrowing. A lot of what we fund was already DCC eligible and will continue to be partially funded with debt regardless of these recent changes. There’s a lot of different funding sources that go in to make each project. Each region and municipality are slightly different as to how they approach it and whether they debt finance a project at all.

**Mansoor Khan (RBC):** Laura and Craig, are there any more updates as it relates to Bill 23? There was a lot of uncertainty last year around this time. 1 year later, what are your observations, where do things stand, and what challenges are you going to face going forward?

**Laura Mirabella (York):** There’s still a lot of uncertainty, and there is some certainty as we know that the phase ins have been implemented. Whatever our rate was for the first year, we were only

able to collect 80% of that. After a year, it'll be 85%, 90%, and so on. We know that from phase-ins alone, we had to give discounts more than C\$35 million dollars just in the first six months of this year, and those are discounts that need to be funded from non-development charge sources. Property tax levy and water rates, as I pointed out before, are on track for a small surplus. What is likely going to be the case, is that we'll have to use that to make up the difference. It doesn't sound so bad on the surface, except that where we would normally put those surpluses is to help supplement our asset management reserves. York Region uses what we believe to be our entire debt capacity to help fund growth related infrastructure. That means in order to keep our assets in a state of good repair, we need to use our asset management reserves, and we've been on a decade long journey to try and get those reserves funded at a level that can help bring more equity amongst generations in keeping those assets in a state of good repair.

There's a lot of other uncertainties the Province continues to talk about, like for exemptions for affordable housing related to Bill 134 that they released not that long ago. It proposes a definition, and we're cautiously optimistic because they did listen somewhat to the sector since when they first announced it. They had said that based on market prices, anything less than 80% of the average market price would get a full exemption with no tie to income levels and true affordability. They've come back and now there's a tie to the 60th percentile of income. So, at least we have some parameters around that. We know that in York region, less than 5% of units that came on to the market in 2022 would have qualified under those criteria. We don't know whether it will actually have an impact on the market, to have them bring product to market at those levels, requiring us to provide exemptions. But whatever exemptions we must provide, we will have to fund from non-development charge sources, and that will ultimately be a pressure on current operations or asset management.

---

## Our year-to-date ridership at the end of October is 50% higher than 2022, and higher than the year preceding COVID.

*Craig Dyer, Waterloo*

---

**Craig Dyer (Waterloo):** I echo most of what was said. Maybe the one difference here at the Region of Waterloo is we're still working off of our old by-law, so we haven't had to deal with the issue of the mandatory phase-in yet, but we know it's coming and we're doing some work right now to figure out when we want to go ahead and update our development charge by-law. There are a couple of other things that I would say are still uncertain in addition to affordable housing - there's Bill 23 which introduced the notion of "attainable housing", and we're still waiting for the rules around that and we're also waiting for a regulation with respect to prescribing certain land acquisition that may be DC ineligible. All of this means that the

property tax and taxpayers are going to pick up a greater portion of growth-related infrastructure in the future. There are other provisions of Bill 23, which when proclaimed, result in upper tier municipalities not having planning responsibilities, and although the Act has received Royal Assent, that requirement has yet to be proclaimed. This adds on to the previous answer about the uncertainty that we find ourselves in. We have a planning group that is required to keep performing their legislated role under the Planning Act, but we have this clause that could be proclaimed at any time, which is creating a lot of uncertainty both at the upper tier and at the lower tier levels.

### **Mansoor Khan (RBC):** Moving onto the topic of transit, any observations as it relates to what you forecast for next year?

**Craig Dyer (Waterloo):** For us this is turning out to be quite a remarkable success story. What we've experienced over the last 3 or 4 months is a dramatic rebound in transit ridership. We had our busiest months ever in September and October of 2023. That has put us in a situation where our year-to-date ridership at the end of October is 50% higher than 2022, and higher than the year preceding COVID. So, when you go back to 2019, we're well above those estimates and that has done a couple of things from a financial perspective - additional revenue over and above what was budgeted in 2023, and it has allowed us to build in additional revenue into our 2024 budget. It has put us in a situation where we're dealing with crowding on some of our more significant routes. As I think some of you may have heard, we have a Stage 1 light rail transit system that's now been in place for 4 ½ years. And overall, when we look at LRT as well as our conventional bus service, 2023 will be our highest ridership year ever with over 25 million rides. For context, 2019 was about 22 million rides, and we dropped down as low as 10 million during the COVID period. We're anticipating ridership could be between 27 and 28 million by 2025, partly because of COVID recovery and more people going back to the office. More significantly, it's related to the significant increase in enrollment at our post-secondary institutions. We have a universal pass program in place at the University of Waterloo and at Wilfrid Laurier, and we have a term pass arrangement with Conestoga College. We're seeing significant ridership increases since the day after Labour Day and those have continued all the way through the month of November. It is a good news story for us, and hopefully it continues into 2024.

**Laura Mirabella (York):** On a similar trajectory, COVID was devastating for our growing transit system. We had about a 60% drop off in ridership and fare revenue. Because of covid measures, enforcement went down, and we just had very few revenue collections. At that time, the best advice we had was that it would take until 2026 for ridership to recover, never mind growing. Our 2023 budget was created on that basis, and we have been very pleasantly surprised this year. We had a hint last year that we were starting to recover a little faster than the original trajectory had projected. But this year has been quite spectacular. We are predicting to be at pre-pandemic levels by 2024, and in fact, on a year over year basis,

this past summer, we were at pre-pandemic levels. So that is helpful for lots of reasons, including it has provided a bit of fiscal flexibility this year to manage some of the other cost pressures that we've had. It will help contribute to that small surplus that I'm hoping to see at the end of the year. It also means that as I'm tabling my budget tomorrow, we've been able to change some of our forward projections, and that's helped us in the preparation of our 2024 budget since it has provided a bit of fiscal flexibility. So, we've been able to build in or manage some of the pressures that are coming from other departments and I'm hoping that counsel will be pleased by what they see tomorrow.

**Christine Dacre (TransLink):** We're very pleased with how our ridership has recovered. We have one of the fastest recovery rates in transit agencies in North America, as we were as low as 17% when COVID first hit we are now averaging about 85%. In some areas of our region, we are well over 100%, more so around 120% of pre-covid levels. Our ridership is back and it's back strong. What's changed is probably the distance that people are traveling because they're not traveling as far. People also aren't going to work for 5 days a week anymore. Out in the Valley, they'd be taking transit all the way to downtown Vancouver, but they're not doing those 5 days a week. It will be interesting to see what happens over the next couple of years though, because I am hearing things about companies wanting to bring people back to the office a bit more. It'll be interesting to see, but right now we're kind of forecasting that the trends as far as peak travel times, off peak or weekend travel, is our new normal. That's what we're assuming in the budget next year. The growth is really coming from employment levels, population growth, and that's what we are using in our forecasts. Compared to budget our ridership is about 5% higher, which is about 23% compared to the same period in 2022. For the trends next year, we're forecasting it to be about 2% over 2023 levels. And again, as I said, it is based on population and employment where we're forecasting our growth.

**Mansoor Khan (RBC):** I know we haven't talked a lot about immigration, but that certainly is a key driving point as well. Craig mentioned about the university ridership. A lot of it is being driven by the growth in international students coming to Canada, so there's no surprise there. Let's talk about the borrowing programs and Christine I will start with you. Last year you accessed the market with the green bond after an absence of a year. First question would be, how was that received given your absence from the market previously, and secondly, how are you currently approaching the borrowing program?

**Christine Dacre (TransLink):** Yes, we were absent for a year, but I will say the year prior to that, we did two issuances, and one was quite large. With the uncertainty of the market during COVID we did not want to leave ourselves short, so we took advantage of the time when we were able to access the market. Last year we issued the C\$300 million Green Bond which was met with high demand. We had over C\$550 million of interest and I think there was about 35 investor participants. It was the beginning of December last year

when we issued that bond and had been closely monitoring the conditions to look for favorable borrowing conditions, so we were able to take advantage of the brief window where the Government of Canada benchmark yields dropped. I think the takeaway from that is be prepared and be ready to go. Moving forward we do have funds available for our capital projects and our plans are to continue to issue Green Bonds and utilize the available funds for our non-green capital requirements. That is our overarching plan. Will that change? It could, depending on the market as well. We are planning on coming to the market this year. We are keeping our eyes on it. Nice to hear that Laura had such a success this week but if it doesn't happen, we're okay. We have good liquidity. We do have a large borrowing program next year as well. You want to make sure that you're not pushing everything into the one fiscal year. We're very fortunate that we do have options and that we are able to look at the volatility of the market and the demand, and when the demand is right and the market conditions are good, we will be ready to go. That is our philosophy.

---

**We looked into the future couple of years and thought of what our burning needs are and did a bigger borrowing during covid when we had the opportunity.**

*Laura Mirabella, York*

---

**Laura Mirabella (York):** Just like Christine, during COVID we probably went overboard as well or pre-borrowed is a better way to put it. Rates were historically low, likely not to be that way again. So, we looked into the future couple of years and thought of what our burning needs are and did a bigger borrowing during covid when we had the opportunity. We didn't need to go to the market last year as rates were starting to rise and we had sufficient funds in the DC reserves. We really weren't sure what was happening. So, you saw us make our move this week with a very successful placement of C\$150 million.

**Mansoor Khan (RBC):** Perfect, and do you have a number for next year already or is that a TBD at this point?

**Laura Mirabella (York):** TBD, stay tuned for my budget tabling presentation with Council tomorrow.

**Mansoor Khan (RBC):** Thank you Laura. Matt, you've referenced this year's borrowing program a few times. Perhaps if you can share any key takeaways from your perspective from the borrowing that you've done this year, and what you're expecting next year?

**Matthew O'Rae (MFABC):** As I reflect on the past year, interest rates have impacted the borrowing program without a doubt. MFA is insulated from rising interest rates, but our members aren't

because we pass-on the interest rates we lock-in when we borrow. But I think there's certainly other factors that play there for us with the slower borrowing that we've experienced. I mean, it was an election year in 2022 so it takes a bit of time to get those priorities going but a lot has to do with the magnitude of capital projects in development, labor shortages, affordability and project escalation. The C\$1 billion dollars of funding that I referred to earlier that the province sent to local governments I think impacted more of the smaller borrowers and then on top of that, they were already delaying, re-scaling or canceling them themselves. So, they had large cash infusion and then those challenges that we've talked about. I think the bigger impact for MFA this year, which caused us to change our borrowing guidance right out of the gate was particularly driven by a couple big water and sewer treatment plans that were delayed. One had a contractor issue that caused them to retender and so that had a material impact on what we experienced this year. But, as I said, a lot of good positive conversation for example, there are a lot of hospital projects across the province and we're going to start to see those come through in 2025, 2026 and 2027. That is probably what I'd say about this year, but most of the times it is up to the market. We certainly had some challenging market conditions this year but every time we came to market, 25 to 35 investors were showing good, strong interest. The books were well over subscribed, not off the charts, but well oversubscribed. Sometimes we kept pricing per guidance, and sometimes we tightened it in a little bit. I think issuers had to be very careful with spread levels for primary issuance. Those would be my comments and observations in 2023.

**Mansoor Khan (RBC):** Any thoughts on borrowing plans for next year? You also issued 20-years previously, any plans of doing that again in the coming year?

**Matthew O'Rae (MFABC):** When we do 5 years, it's primarily for refinancing with the way that we package up our loans from 5 out to 30 years. We'll see a little drop in our refinancing requirements for 2024. That's not an indicator of anything, to be honest, we pretty much can telegraph what refinancing we're going to do for the next 5 years. It just happens to be a little bit of a drop relative to the loans that are fully amortized and falling off. So, we'll probably be in the market, with 2 issues for probably C\$650 million for refinancing purposes. We'll tighten those up and decide on timing as we move forward.

The trickier question is more around the 10-year for new loan lending. We've got an estimate right now of C\$550 to C\$750 million. We would come to market twice for that, so, two 5s and two 10s, depending on how new loan origination and how some of these projects that were delayed come back on track, particularly those projects that had contractor issues.

We would love to get back to the 20-year part of the curve. It was so well received by investors. They would like to see more MFA in that part of the curve.

I think given the size of our overall issuance right now though, with this little lull, continuing to focus on that 10-year part of the curve for new funding and having those liquid benchmarks continues to be our focus now. I think with what's planned for 2026 to 2029, for waters, sewer and hospitals, those amounts will grow, and that's when we'll start to really look closely at the 20-year part of the curve. We're also working closely with some of our larger clients that typically finance big, long-lived assets over 15 years. There's a desire from an affordability perspective to amortize those loans over a longer horizon, which is more conducive to us issuing more 20 years.

**Mansoor Khan (RBC):** Waterloo has been a consistent issuer in debt markets over the last several years. The region has primarily targeted serial bonds. Why has the region historically targeted serial bonds, how has the experience been so far this year, and what are your expectations for the next year?

**Craig Dyer (Waterloo):** As to why does the Region primarily issues serial bonds instead of bullets, simply put, given the typical quantum of our borrowing needs, the serial structure gives us the lowest cost of borrowing. Now, I get that the benefit may not be quite as significant in a time of an inverted yield curve, but overall, historically, when we've looked at our needs and at the term and the amount, we typically land on a serial structure due to the cost of borrowing.

We do look at the structure every time we go to market. It's not that we're opposed to bullets, we've done them before, it just seems over the last several years, with the amount that we're looking for, which has typically been over a 10-year term, we just seem to be best suited to that serial structure.

I think that there are projects in our capital budget that are going to make us rethink this approach in the future. Particularly some of our water and wastewater projects, and we have some significant housing projects as well over the next several years. I think the principal amounts we're going to be looking for are going to be higher than the past, and the term we're going to be looking for will be longer.

When you put those two together, it's going to force us to look into a somewhat different structure. Maybe not in 2024, but certainly when we get into 2025. In terms of what I think this is going to look like in 2024, it's a bit hard to say. Our budget is not yet approved. I would speculate that our borrowing in 2024 would be somewhere in the C\$80 million range, plus or minus C\$20 million way. It's going to depend on a few things - the pace at which we're completing projects as well as supply chain issues. Once we pull all that together and we combine that with the extent to which our development charge collections remain strong, we may be able to fund some of our growth-related work directly from our DC reserves instead of borrowing. So, a little bit of uncertainty, but C\$80 million plus or minus C\$20 million is the most likely range for us.

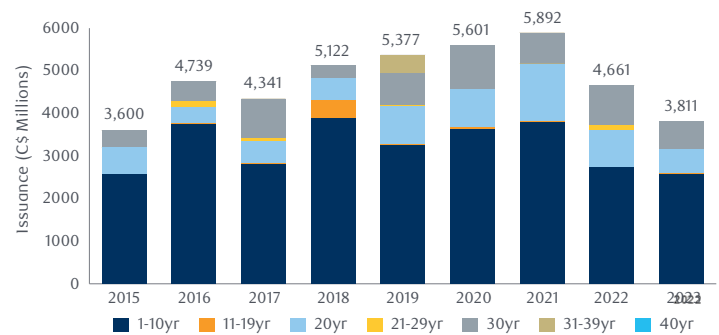
**Mansoor Khan (RBC):** City of Vancouver was in the market this year with a sustainability bond. Any observations that stand out for you as far as your experience was concerned on the transaction? What are your plans going forward? I understand you are doing a combination of green, sustainability and conventional bonds. How are you approaching the program going forward?

**Patrice Impey (Vancouver):** With our last issuance just last month, we were right amid a lot of turmoil with both the bond market and also what was happening globally, but found a nice window there to issue, oversubscribed by about 1.5 times. So that was comforting, given the uncertainty at the time. It was a sustainability bond, and about half of the investors had UNPRI or other green mandates, so that was encouraging. It was mostly domestic investors, but also had US and other internationals.

As far as going forward, we are predictable with debt issuance timelines. We use our debt for infrastructure renewal and because of that, we have an ongoing need. We're continuing to renew our assets, so we are in the market almost every year, and in a pretty consistent amount because we have a long-term asset planning model. We expect to be back same time next year, and we have been alternating between Sustainable and conventional bonds. We

have a sustainability bond framework so we can do green, social or sustainable, or a combination. We do that and we do conventional bonds because not all our capital program is green or sustainable, or projects are small and we don't want to do all of the reporting related to it for smaller project, so we've been alternating. As you all know, we can only borrow for capital, so all the borrowing is directed to capital infrastructure. So that's how we've been planning out our debt needs and our asset planning.

#### ANNUAL C\$ MUNICIPAL ISSUANCE



Source: RBC Capital Markets

## ESG AND SUSTAINABLE FINANCE INITIATIVES

**Mansoor Khan (RBC):** On the topic of ESG, what kind of broader targets do the cities have related to ESG? And what would be the key highlights that you would want to share with the audience on the Vancouver sustainability report? Any specific challenges that you faced in drafting that report?

**Patrice Impey (Vancouver):** As for our ESG target, the City identified there's a climate emergency many years ago. We've had a few different initiatives to address that. The one we're currently working on is our climate emergency action plan, which was approved by council in 2020. The goal is to reduce our carbon pollution by 50% by 2030 and be carbon neutral by or before 2050, and there are specific plans on those targets. As with most cities, it's mostly driven by 2 areas, which is fossil fuel vehicles, that's 40%, and the bulk of the rest is in our buildings, and then there's a few other smaller ones.

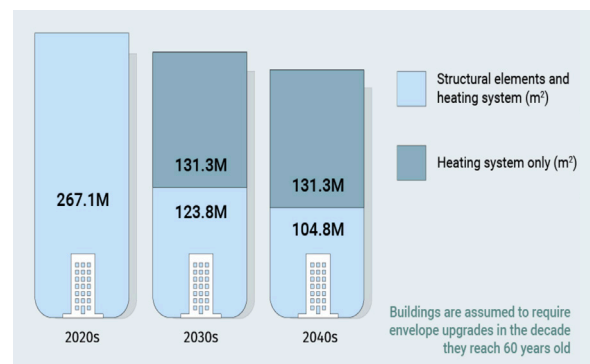
So, there's a lot of activity around both of those areas. I think the vehicle one is moving quickly. People can see where that is leading, and we're focusing largely on encouraging more use of non-vehicles transportation, so we can get people into walking, cycling, or taking transit. We have also enabled EV charging, making sure that the structure is there. One of the biggest challenges is our buildings. For several years, we've updated our building bylaws which addresses the greenhouse gas in new builds. Now the focus is on existing buildings and retrofits, which also involves working with senior government funding. We are making progress, and we're going to

Council in the Spring with updated actions. The focus is to get us to our 50% by 2030.

Regarding our reporting, we have reported on 6 projects that were from our green bond framework which we issued back in 2018. We have reported under the sustainability framework that they were completed, and they met the goals. So those have been reported out, including the KPIs. We are happy with how that's worked, and we continue to manage

#### CANADIAN BUSINESSES MUST RETROFIT A THIRD OF ALL COMMERCIAL SPACE EACH DECADE

Million meters squared of commercial and institutional space



Source: Natural Resource Canada, RBC Climate Action Institute

the projects we bring through as far as the amount of effort on the reporting side. We have tried to balance that so far and it's working fine.

**Mansoor Khan (RBC):** I've heard time and time again that the reporting that ESG labeled bond issuers do goes a long way for investors to share with their own clients. It makes it a lot easier for them to answer the questions they get from their clients. It's certainly something that is quite valuable. Christine, is there anything related to ESG targets that you want to share?

**Christine Dacre (TransLink):** For our climate mitigation, our target is 45% reduction in GHG emissions by 2030 and net zero by 2050. We also have a target of zero tailpipe emissions from the bus fleet by 2040. On our climate adaptation, we're trying to create a climate resilient, public transportation system. We're doing a lot of work on that through our climate action plan as well as completing the revised zero emission transition plan that should be out early in the new year. From an EDI perspective, our target is to climb up the maturity scale under the global diversity, equity, and inclusion benchmark standard. Our current level is 2, and we'd like to move that up to a level 3. As far as our Green Bond annual report, most of the proceeds of our green bonds so far are going to support clean transportation, clean efficiency or energy efficiency and renewable energy projects. For example, our investments in SkyTrain systems, including the rail car stations, maintenance facilities, also our battery electric buses and electric trolley, bus system, pedestrian and cycling infrastructure, and energy efficiency upgrades. We report on our key performance indicators related to the GHGs, but also more importantly, our ridership and renewable energy.

---

## On our climate adaptation, we're trying to create a climate resilient, public transportation system.

*Christine Dacre, TransLink*

---

As many of our projects span across a number of years, we have multiple green bond issuances that include funds for the same project. We're looking to improve our reporting to more clearly identify those projects. On the flip side, it may take a couple of years of impact reporting because the project isn't finished yet. So, in our impact reports, we're reporting some of what our estimated impacts are until the project is actually completed. We really want to do a better job in reporting not only the project benefits, but also the broader benefits. We are really trying to work with our investors to understand better what they're looking for in a report and we've had a number of meetings this year with a number of investors, and that's always a question we ask because it does take multiple years to complete the projects. You have a green bond that is multiple projects, so it's really about trying to fine tune and meet that investor requirement as to what they need and be able to do efficiently.

**Mansoor Khan (RBC):** I think it's commendable. I know from the very first time you published that report, you've always been looking for investor feedback to continue improving it further. What you've just highlighted is fantastic. One thing that stands out in the ESG space is the evolution of reporting. Everyone starts from a different place and continues to build from there. Switching over to Matt – MFABC had started sharing use of proceeds information when launching the transaction. It included the various categories and projects that the money was going to be used for. We understand that MFABC has been having regular dialogue with its borrowing members to eventually get to a position where you could get more details on the impact of the projects. Curious to know how those conversations have gone in the last year. How does MFABC look at that in terms of medium to long term plan as it relates to reporting?

**Matthew O'Rae (MFABC):** Definitely an interesting area. It's probably the topic we spend the most time working on these days. It's always evolving, that's the best part. So, as you said, we're mapping the proceeds of each bond issue to the UNSDGs, and our sustainable bond framework indicates that we're also working towards tracking and reporting impact KPIs.

So, this is a bit of a journey. We obviously have a lot of members that roll up into any one of those issues, so we've let our members know that in the near future, we're going to have some expanded requests for information at the time of borrowing. Initially we'll be focused on the material loans that comprise a bond issue, and we're still working on exactly what those requests are going to be.

Like Christine, we're having a lot of conversations with institutional investors, credit rating agencies, and the full spectrum of impacted stakeholders regarding what transactional and what annual information do they need for their investment decision-making purposes for measuring impact and assessing climate. There is a lot of dialogue going on. We're also talking with a lot of the banks as well, credit unions and other MFA-like infrastructure peers around the globe that are a few years ahead of us in this space. We're also having discussions internally, trying to figure out what potential targets / metrics we are going to collect, and how to report this going forward for bondholders and their investment portfolios. We are figuring out which KPIs might be requested by the borrowers, which ones are the most important to them so that we can do this in a reliable, relevant, decision-useful manner for current and prospective bondholders.

I think what's interesting for us, although it's not yet a requirement and on a voluntary basis for us, is that the investor focused sustainability disclosure standards of ISSB and OSFI regulatory requirements, are both based on TCFD framework, which are annual in nature and primarily risk based. In contrast, the transactional reporting requests of investors at the time of bond issues are primarily impact-based. So, we're trying to figure out a way to measure and report and achieve both that risk and impact reporting, and that has been an interesting time in this evolution. We're

prioritizing at this juncture our annual disclosure to keep pace with our adoption of ISSB standards. So S2, S1, and then we're also focusing on our portfolio level risks and impacts from our lending activity. We are working on a methodology for our GHG reporting and making very good progress. There's a lot of useful data out there that we're working through and having a lot of dialogue with members and investors to figure out exactly what everyone wants and needs. So that's where we're at.

---

**We are figuring out which KPIs might be requested by the borrowers, which ones are the most important to them so that we can do this in a reliable, relevant, decision-useful manner for current and prospective bondholders.**

*Matthew O'Rae, MFABC*

---

**Mansoor Khan (RBC):** That's helpful context Matt. I think people recognize the unique structure of MFABC. MFABC is reliant on its borrowing clients to do all the work for you to be able to get that information. It is great to see the effort you are putting in to eventually get to a point where you will be able to potentially provide the impact metrics. Just a follow up question on ESG, any interesting trends to highlight on the investing side?

**Matthew O'Rae (MFABC):** We continue to look at different ways with our asset manager for our pooled investment products to give good reporting metrics around that. So, we're working very closely with our main external asset manager, PH&N, to evolve that. Most of our clients are interested in Socially Responsible Investing for their own reserves, but most are treading carefully, many want to make sure that any ESG-investing approach they take on is valuable and has an impact. A few have decided that they want their portfolios to be "Fossil Fuel Free". Others don't have a fossil fuel free exclusionary philosophy, so we're working with everyone that has a variety of mandates, trying to help work on definitions. We've been working on labeling our suite of products. So outside of our high interest savings account and our money market funds, all the other investment funds that we offer do have and integrate ESG factors in various ways. There's been a lot of requests and interest from members to be honest, so that continues to evolve. I think there is a lot of exciting pieces there. On our internal sinking funds, we're not targeting the purchase of any labeled bonds. We're not chasing them and we're not avoiding them either, but we've got a very specific strict asset liability matched approach when we go to market to buy securities for the sinking funds. I think we have a view that Canadian government paper overall, regardless of whether it's federal, provincial, or municipal has a large degree of sustainability embedded into their operations at the entity level, but

we're looking at different ways to report on the financed emissions from our investments. More dialogue on that continues. There's lots of different ways, I wouldn't say there's one way to do it yet. That's an interesting space that we're watching and evolving our philosophy on. From the client's perspective, for us, it's going to be voluntary, such as the ISSB standards through IFRS. I think a lot of our members want to be part of those efforts. Members want to contribute to our success and expand our disclosure and reporting efforts, so it's very much a hand in hand and open dialogue with them.

**Mansoor Khan (RBC):** Craig, Waterloo hasn't done any ESG labeled bonds, but does the Region plan on doing one in the near future? Are there any other ESG initiatives that the Region is working on at this point that you would want to highlight?

**Craig Dyer (Waterloo):** I would say that it's unlikely that we'll do an ESG issue in 2024. I think it's something that we need to look at and going back to my previous comments about our Waterloo Region Housing Master Plan projects, this is about a half a billion-dollar investment. A significant amount of it is to be debt financed. So, as we think about what that debt issuance looks like over the period of, say, 2025 to 2028 or 2029, I think this could give us the critical mass if you will, to consider exploring that type of issue. Like many municipalities, the region declared a climate emergency, and we have adopted a similar if not identical reduction target to what we heard from the City of Vancouver today.

We've moved off of acquiring any more diesel buses for our transit fleet, and we are incorporating electric vehicles into our non-transit fleet. A big part of our strategy here was the investment in stage 1 LRT through the Central Transit Corridor and that has resulted in a significant amount of growth and intensification within that area, partly to avoid urban sprawl and the environmental impacts associated with it. So significant investments are planned for down the road. We will over the course of 2024 spend some time thinking about what our financing strategy looks like for the following 5-year period.

**Mansoor Khan (RBC):** Great, thanks again, finally Laura, your thoughts please?

**Laura Mirabella (York):** It is unlikely that we will issue a bond that that is branded as an ESG bond over the next year. That said, you may recall that last year, I talked about the intention to introduce an ESG framework into our planning and budgeting framework. We have been working on that over the last year and have really created a framework for ESG that is aligned with our strategic plan.

We already had sustainability or environmental sustainability in our strategic plan. We have a climate change action plan that's been in existence for a couple of years now, where we are tracking specific initiatives. Under the social category, we put all our economic prosperity and our community health and safety into that bucket. We have already had a pillar in our Strategy plan on governance,

and so governance is there as well. Over the next year we will be incorporating that even more into our budgeting framework, and in the way that we report to council, and as we do that, we will be able to tie that to specific capital borrowing in the future, so don't lose hope. We may issue an ESG bond in the future, but not at this point.

**Mansoor Khan (RBC):** Thank you everyone for your participation once again in the RBC Municipal Treasurers roundtable. We look forward to having this chat again next year and wish you all a great rest of the day.

## SELECT CANADIAN PUBLIC SECTOR BORROWING PROGRAMS – 2023

The need and appetite for borrowing varies greatly between each Province and organization. To help understand the various key Canadian public sector borrowing programs and their characteristics, below is a comparison breakdown.

	 ONTARIO	 QUEBEC	 ALBERTA	 MANITOBA	 SASKATCHEWAN	 BRITISH COLUMBIA	 NFLD & LABRADOR
<b>PREMIER/CEO</b>	Hon. Doug Ford	Hon. François Legault	Hon. Danielle Smith	Hon. Wab Kinew	Hon. Scott Moe	Hon. David Eby	Hon. Andrew Furey
<b>FINANCE MINISTER/CFO</b>	Hon. Peter Bethlenfalvy	Hon. Éric Girard	Hon. Nate Horner	Hon. Adrien Sala	Hon. Donna Harpauer	Hon. Katrine Conroy	Hon. Siobhan Coady
<b>CAPITAL/HEADQUARTERS</b>	Toronto	Quebec City	Edmonton	Winnipeg	Regina	Victoria	St. John's
<b>POPULATION ('000S)<sup>(1)</sup></b>	15,802	8,949	4,756	1,465	1,219	5,581	540
<b>SHARE OF CANADA GDP (%)<sup>(2)</sup></b>	38.7%	19.7%	15.3%	3.2%	3.5%	13.8%	1.4%
<b>BORROWING YEAR</b>	Apr-Mar	Apr-Mar	Apr-Mar	Apr-Mar	Apr-Mar	Apr-Mar	Apr-Mar
<b>RATINGS (DBRS/MOODY'S/S&amp;P)</b>	AA(L) / Aa3 / A+	AA(L) / Aa2 / AA-	AA / Aa2 / AA-	A(H) / Aa2 / A+	AA(L) / Aa1 / AA	AA(H) / Aaa / AA	A(L) / A1 / A
<b>% CAD ISSUANCE<sup>(3)</sup></b>	88%	64%	93%	65%	100%	45%	100%
<b>RECENT INTERNATIONAL ISSUANCE<sup>(3)</sup></b>	USD, AUD, EUR, GBP	USD, CHF, EUR, GBP	USD	USD	USD	EUR, USD	n/a
<b>2022/23 BORROWING (C\$BN)<sup>(3)</sup></b>	32.2	24.4	2.4	4.0	2.0	8.9	1.7
<b>2023/24 BORROWING REQUIREMENT (C\$BN)<sup>(3)</sup></b>	34.7	21.9	5.5	5.2	2.0	17.5	2.2
<b>YOY INCREASE (C\$BN)</b>	2.5 (+8%)	-2.5 (-10%)	3.1 (+129%)	1.2 (+30%)	0 (-)	8.6 (+97%)	0.5 (+29%)
<b>ESTIMATED 2024/25 BORROWING (C\$BN)<sup>(4)</sup></b>	37.4	29.0	6.1	5.3	n/a	20.5	n/a
<b>DOMESTIC TARGET TERMS</b>	5 / 7 / 10 / 30	5 / 7 / 10 / 30	5 / 10 / 30	5 / 10 / 30	5 / 10 / 30	5 / 7 / 10 / 30	7 / 10 / 30
<b>PUBLIC DEBT O/S (C\$BN)<sup>(5)</sup></b>	402.3	243.8	91.6	53.8	28.7	83.8	19.0
<b>ACTIVE ULTRA-LONG ISSUERS<sup>(6)</sup></b>	C\$50MM	n/a	n/a	C\$250M	\$360M	n/a	n/a
<b>MIN. CARVE-OUT SIZE<sup>(7)</sup></b>	\$600M (5yr) / \$500M (10yr) / \$400M (30yr)	n/a	\$200M	\$150M	\$100M	n/a	\$100M
<b>ACTIVE ESG ISSUANCE PROGRAM</b>	Green Bond Issuer	Green Bond Issuer	n/a	n/a	n/a	n/a	n/a

(1) Statistics Canada. Table 17-10-0009-01 Population estimates, quarterly as of Q3 2023 (2) Statistics Canada. Table 36-10-0402-02 Gross domestic product (GDP) at basic prices, by industry, provinces and territories, growth rates (x 1,000,000) (3) RBC Capital Markets. Provincials & PSP based on Government Fiscal Year (April 1-March 31); CPP, Canada, CMHC and EDC based on Calendar year (4) Provinces, RBC Capital Markets, figures based on most recent borrowing program (5) Bloomberg (6) RBC Capital Markets; Based on historical issuances 2010 onwards (7) Large order protocol, order placed to one investor \* RBC Economics † Based on Jan - Dec Calendar Year

Select Canadian Public Sector Borrowing Programs – 2023 Continued






	NOVA SCOTIA	NEW BRUNSWICK	PEI	CANADA	CMHC	PSP	CPP	EDC
<b>PREMIER/CEO</b>	Hon. Tim Houston	Hon. Blaine Higgs	Hon. Dennis King	Hon. Justin Trudeau	Michel Tremblay	Deborah K. Orida	John Graham	Mairead Lavery
<b>FINANCE MINISTER/CFO</b>	Hon. Allan MacMaster	Hon. Ernie Steeves	Hon. Jill Burridge	Hon. Chrystia Freeland	Nadine Leblanc	J-F. Bureau	Kristina Fanjoy	Scott Moore
<b>CAPITAL/HEADQUARTERS</b>	Halifax	Fredricton	Charlottetown	Ottawa	Ottawa	Montreal	Toronto	Ottawa
<b>POPULATION ('000S)<sup>(1)</sup></b>	1,066	843	176	40,528	n/a	n/a	n/a	n/a
<b>SHARE OF CANADA GDP (%)<sup>(2)</sup></b>	2.0%	1.6%	0.3%	n/a	n/a	n/a	n/a	n/a
<b>BORROWING YEAR</b>	Apr-Mar	Apr-Mar	Apr-Mar	Apr-Mar	Jan-Dec	Apr-Mar	Jan-Dec	Jan-Dec
<b>RATINGS (DBRS/MOODY'S/S&amp;P)</b>	A(H) / Aa2 / AA-	A(H) / Aa2 / A+	A / Aa2 / A	AAA / Aaa / AAA	AAA / Aaa / AAA	AAA / Aaa / AAA	AAA / Aaa / AAA	AAA / Aaa / AAA
<b>% CAD ISSUANCE<sup>(3)</sup></b>	100%	100%	100%	100%	100%	100%	50%	0%
<b>RECENT INTERNATIONAL ISSUANCE<sup>(3)</sup></b>	n/a	n/a	n/a	USD	n/a	USD, AUD	USD, AUD, GBP, EUR	USD, AUD, EUR, GBP, HKD, CNY etc.
<b>2022/23 BORROWING (C\$BN)<sup>(3)</sup></b>	1.5	1.9	0.2	185.0*	40.0†	4.6	15.2†	13.3†
<b>2023/24 BORROWING REQUIREMENT (C\$BN)<sup>(3)</sup></b>	2.0	1.7	0.3	204.0*	45.0†	5.0	15.0†	14.0†
<b>YOY INCREASE (C\$BN)</b>	0.5 (+33%)	-0.2 (-11%)	0.05 (+25%)	19 (+10%)	5 (+13%)	0.4 (+9%)	-0.2 (-1%)	0.7 (+5%)
<b>ESTIMATED 2024/25 BORROWING (C\$BN)<sup>(4)</sup></b>	2.3	n/a	n/a	n/a	60.0†	6	15-16	14.0†
<b>DOMESTIC TARGET TERMS</b>	5 / 10 / 30	5 / 10 / 30	10 / 30	-	5 / 10	3 / 5 / 7 / 10	3 / 5 / 7 / 10 / 15 / 30	2 / 3 / 5
<b>PUBLIC DEBT O/S (C\$BN)<sup>(5)</sup></b>	16.1	21.3	2.7	989.1	254.0	19.3	68.0	47.0
<b>ACTIVE ULTRA-LONG ISSUERS<sup>(6)</sup></b>	n/a	n/a	n/a	n/a	n/a	n/a	~C\$1.53B	n/a
<b>MIN. CARVE-OUT SIZE<sup>(7)</sup></b>	n/a	\$100M	n/a	n/a	n/a	n/a	n/a	n/a
<b>ACTIVE ESG ISSUANCE PROGRAM</b>	n/a	n/a	n/a	Green Bond Issuer	n/a	Green Bond Issuer	Green Bond Issuer	Green Bond Issuer

(1) Statistics Canada. Table 17-10-0009-01 Population estimates, quarterly as of Q3 2023 (2) Statistics Canada. Table 36-10-0402-02 Gross domestic product (GDP) at basic prices, by industry, provinces and territories, growth rates (x 1,000,000) (3) RBC Capital Markets. Provincials & PSP based on Government Fiscal Year (April 1-March 31); CPP, Canada, CMHC and EDC based on Calendar year (4) Provinces, RBC Capital Markets, figures based on most recent borrowing program (5) Bloomberg (6) RBC Capital Markets; Based on historical issuances 2010 onwards (7) Large order protocol, order placed to one investor \* RBC Economics † Based on Jan - Dec Calendar Year

## SELECT CANADIAN MUNICIPAL ISSUERS

	 <b>Montréal</b>	 <b>Municipal Finance Authority of BC</b>	 <b>TORONTO</b>	 <b>TRANS LINK</b>
	<b>MONTREAL</b>	<b>MFABC</b>	<b>TORONTO</b>	<b>TRANSLINK</b>
<b>RATINGS</b>	A(H) / Aa2 / AA	Aaa / AAA	Aa1 / AA	AA / Aa2
<b>TYPICAL ANNUAL BORROWING REQ. (C\$MM)</b>	650-1,300	1,000-2,000	950-1200	200-650
<b>2023 DEBENTURE FUNDING</b>	C\$820 million	C\$1.105 billion	C\$1.0 billion	C\$300 million
<b>TYPICAL # ANNUAL ISSUES</b>	2-4	3-4	4-5	1-2
<b>TYPICAL MATURITIES</b>	"10-year 20-year"	"5-year 10-year"	"10-year 20-year 30-year"	"5-year 10-year 30-year"
<b>PUBLIC DEBT OUTSTANDING (C\$MM)</b>	11,063	9,261	10,359	3,580

	 <b>CITY OF VANCOUVER</b>	 <b>Region of Waterloo</b>	 <b>York Region</b>
	<b>VANCOUVER</b>	<b>WATERLOO</b>	<b>YORK</b>
<b>RATINGS</b>	Aaa / AAA	Aaa	Aaa / AAA
<b>TYPICAL ANNUAL BORROWING REQ. (C\$MM)</b>	100-120	60-90	150-400
<b>2022 DEBENTURE FUNDING</b>	C\$100 million	C\$60 million	C\$150 million
<b>TYPICAL # ANNUAL ISSUES</b>	1	1-2	1-2
<b>TYPICAL MATURITIES</b>	10-year	"10-year 20-year"	10-year
<b>PUBLIC DEBT OUTSTANDING (C\$MM)</b>	1,095	772	3,581

## SELECT RBC-LED TRANSACTIONS IN 2023

### Canadian Government Issuers & Pension Asset Managers/Funds

 <b>US\$1,000,000,000</b> 5.50% Senior Notes due 2033  AAA/Aa1/AA+ Joint Bookrunner November 2023	 <b>C\$8,500,000,000</b> Dual-tranche CORRA FRN due 2029 & 4.25% Senior Note due 2034  AAA/Aaa/AAA Lead November 2023	 <b>US\$2,000,000,000</b> 4.80% Senior Notes due 2028  AA(H)/Aaa/AA Joint Bookrunner November 2023	 <b>C\$1,250,000,000</b> 4.90% Inaugural Debt Offering due 2033  AAA/Aaa/AAA Joint Bookrunner October 2023
 <b>C\$400,000,000</b> 4.50% Senior Notes due 2028  -/Aaa/AAA Joint Bookrunner August 2023	 <b>A\$1,000,000,000</b> 4.40% Senior Notes due 2027  AAA/Aaa/AAA Joint Bookrunner June 2023	 <b>US\$4,000,000,000</b> 3.75% Senior Notes due 2028  AAA/Aaa/AAA Joint Bookrunner April 2023	 <b>US\$1,500,000,000</b> 4.25% Senior Notes due 2028  AAA/Aa1/AA+ Joint Bookrunner April 2023
 <b>US\$3,500,000,000</b> 3.625% Senior Notes due 2028 <b>EUR2,250,000,000</b> 3.00% Senior Notes due 2033 AA(L)/Aa2/AA- Joint Bookrunner April & January 2023	 <b>GBP750,000,000</b> 4.375% Senior Notes due 2026 <b>A\$1,300,000,000</b> 4.40% Senior Notes due 2026 AAA/Aaa/AAA Joint Bookrunner February & January 2023	 <b>C\$2,250,000,000</b> 3.60% Senior Notes due 2028  AA(L)/Aa3/A+ Lead February 2023	 <b>US\$2,000,000,000</b> 4.50% Senior Notes due 2026  AAA/Aaa/AAA Joint Bookrunner February 2023

## SELECT RBC-LED TRANSACTIONS IN 2023

### Green Bonds and Sustainable Finance

 <p><b>C\$300,000,000</b> 4.15% Green Bond due 2053</p> <p>AA/Aa2/- Joint Bookrunner December 2023</p>	 <p><b>C\$100,000,000</b> 4.90% Sustainability Bond due 2033</p> <p>-/Aaa/AAA Lead October 2023</p>	 <p><b>C\$100,000,000</b> 4.40% Green Bond due 2042</p> <p>AA/Aa1/AA Lead September 2023</p>	 <p><b>C\$1,000,000,000</b> 4.40% Green Bond due 2030</p> <p>AAA/Aaa/AAA Joint Bookrunner August 2023</p>
 <p><b>C\$1,000,000,000</b> 4.40% Health Bond due 2026 <b>C\$500,000,000</b> 3.30% Gender bond due 2028</p> <p>-/Aaa/AAA Joint Bookrunner June &amp; May 2023</p>	 <p><b>C\$600,000,000</b> 3.90% Green Bond due 2032</p> <p>AA(L)/Aa2/AA- Joint Bookrunner June 2023</p>	 <p><b>C\$1,500,000,000</b> 4.05% Green Bond due 2032</p> <p>AA(L)/Aa3/A+ Joint Bookrunner February 2023</p>	 <p><b>C\$1,000,000,000</b> 4.15% Green Bond due 2029</p> <p>AAA/Aa1/AA+ Joint Bookrunner February 2023</p>

### Maple Offerings

 <p><b>C\$1,000,000,000</b> 4.25% Senior Notes due 2030</p> <p>-/Aaa/AAA Joint Bookrunner September 2023</p>	 <p><b>C\$500,000,000</b> 4.25% Green Bond due 2028</p> <p>-/Aaa/AAA Joint Bookrunner September 2023</p>	 <p><b>C\$1,000,000,000</b> 4.50% Green Bond due 2026</p> <p>-/Aaa/AAA Joint Bookrunner August 2023</p>	 <p><b>C\$300,000,000</b> 4.85% Inaugural CAD Benchmark due 2026</p> <p>-/Aaa/AAA Joint Bookrunner August 2023</p>
 <p><b>C\$300,000,000</b> 4.57% Social Inclusion Bond due 2027</p> <p>-/Aaa/AAA Joint Bookrunner July 2023</p>	 <p><b>C\$700,000,000</b> 3.90% Senior Notes due 2028</p> <p>AAA/Aaa/AAA Joint Bookrunner June 2023</p>	 <p><b>C\$750,000,000</b> 3.40% Sustainable Development Bond due 2028</p> <p>-/Aaa/AAA Joint Bookrunner May 2023</p>	 <p><b>C\$300,000,000</b> 3.625% Senior Notes due 2028</p> <p>-/Aaa/AAA Joint Bookrunner April 2023</p>

This brochure is for informational purposes only. It is not intended as an offer or solicitation for the purchase or sale of any financial instrument, investment product or service. The information contained herein, has been compiled from sources believed to be reliable, but no representation or warranty, express or implied, is made by RBC Capital Markets or any of its businesses or representatives, as to its accuracy, completeness or correctness. This brochure is intended for sophisticated investors and may not be suitable for all individuals. Readers should conduct independent due diligence and not rely on any credit rating or other opinions contained within this document when making an investment decision. Canada, the U.S., and most countries throughout the world have their own laws regulating the types of securities and other investment products which may be offered to their residents, as well as the process for doing so. To the full extent permitted by law, neither RBC Capital Markets nor any of its businesses or representatives, accepts any liability whatsoever arising from the use of this brochure. This brochure is not, and under no circumstances should be construed as a solicitation to act as a securities broker or dealer in any jurisdiction by any person or company that is not legally permitted to carry on the business of securities broker or dealer in that jurisdiction. No matter contained in this brochure may be reproduced or copied by any means without the prior consent of RBC Capital Markets. To U.S. Residents: This brochure has been approved by RBC Capital Markets Corporation, which is a U.S. registered broker-dealer and a member of NYSE, FINRA and SIPC; and accepts responsibility for this brochure and its dissemination in the U.S. To Canadian Residents: This brochure has been approved by RBC Dominion Securities Inc., which is a member of IIROC and CIPF. To U.K. Residents: This publication has been approved by Royal Bank of Canada Europe Limited ("RBCEL"), which is authorized and regulated by Financial Services Authority ("FSA"), in connection with its distribution in the United Kingdom. This material is not for distribution in the United Kingdom to retail clients, as defined under the rules of the FSA. RBCEL accepts responsibility for this brochure and its dissemination in the United Kingdom. To Australian Residents: This material has been distributed in Australia by Royal Bank of Canada-Sydney Branch (ABN 86 076 40 880, AFSL 246521). If this material relates to the acquisition of a particular financial product, a recipient in Australia should obtain any relevant disclosure documents prepared in respect of that product and consider that document before making any decision about whether to acquire the product. To Hong Kong Residents: This publication is distributed in Hong Kong by RBC Investment Services (Asia) Limited and RBC Investment Management (Asia Limited), a licensed corporation under the Securities and Futures Ordinance, or by Royal Bank of Canada, Hong Kong Branch, a registered institution under the Securities and Futures Ordinance. Hong Kong persons wishing to obtain further information or any of the securities mentioned in this publication should contact RBC Investment Services (Asia) Limited or Royal Bank of Canada, Hong Kong Branch at 17/Floor, Cheung Kong Center, 2 Queen's Road Central, Hong Kong (telephone number is 2848-1388). To Japanese Residents: Securities business (as defined under the Financial Instruments and Exchange Law) in Japan will be carried out by RBC Capital Markets (Japan) Ltd. Tokyo Branch in compliance with all applicable laws and regulations. Banking business (as defined under the Banking Law) in Japan will be carried out by Royal Bank of Canada, Tokyo Branch in compliance with applicable laws and regulations. RBC Capital Markets (Japan) Ltd. Tokyo Branch is a member of the Japan Securities Dealer's Association (JSDA). To Singapore Residents: This brochure is distributed in Singapore by Royal Bank of Canada and RBC (Asia) Limited, registered entities granted offshore bank status by the Monetary Authority of Singapore Act (Cap. 186).

RBC Capital Markets is the global brand name for the capital markets business of Royal Bank of Canada and its affiliates, including RBC Capital Markets Corporation; RBC Dominion Securities Inc. and Royal Bank of Canada Europe Limited. © Registered trademark of Royal Bank of Canada. Used under license. © Copyright 2024. All rights reserved. XP\_Multipage\_12.23