RBC Capital Markets

Canadian Public Sector Borrower Roundtable

JANUARY 2019

TABLE OF CONTENTS

01 | Top Takeaways
02 | Roundtable Participants
03 | Roundtable Discussion
14 | Canadian Federal and Provincial Borrower Profiles
16 | Select RBC-Led Transactions

Top Takeaways

In what proved to be an insightful and engaging discussion, prominent experts in Canada's public sector debt markets reflected on 2018's big trends and shared their forecast for 2019. Here are highlights of the main themes and takeaways from the roundtable.

1 2018 Saw Slower But Steady Growth

Canada's borrowers faced a slower economy in 2018 compared to the more prosperous past couple of years, with domestic growth becoming less reliant on the consumer and household sectors - transitioning to business and export growth. Most provinces experienced 2% GDP growth year-over-year – weaker than expected, but healthy. Weaker stimulus from the commodity, housing and consumer sectors drove some of that slowdown.

2 Nail-Biting Trade Negotiations Impacted Investment Appetite

The year-long negotiations to revamp the North American free trade deal caused considerable uncertainty and angst among businesses, investors and governments, in no small part due to the "Trump effect". The new United States-Mexico-Canada agreement (USMCA), reached in October 2018, brought a huge sense of relief that will drive confidence and investment going forward.

3 Watch for Rate Hikes and the Yield Curve in 2019

Markets will focus on Central Bank action and the future path of rates; interest rate increases are expected in the second half of the year as the Bank of Canada searches for the appropriate "neutral range" in response to economic data. RBC forecasts two rate hikes for 2019 to bring interest rates in the 2.5% to 3.5% range. Against this backdrop, there are serious concerns about how Canadians will fare in a higher interest rate environment.

Canada's yield curve ended 2018 flatter than anticipated, but is expected to steepen due to US pressures – namely, the strength of the US economy backed by strong consumer demand. Recent credit deterioration has made investors cautious about credit spreads in 2019.

4 ESG Investing Offers Compelling Opportunities

While ESG issuance in Canada was robust and grew in 2018, that trend was not exhibited globally as issuer volumes were flat. This trend is expected to continue in 2019 as climate change, income disparity and other Environmental, Social and Governance (ESG) related issues draw media headlines, political attention and investor focus. Issuers have put in efforts around responsible investment strategies, especially Green Bonds. For the most part, pricing will continue to be important for investors.

5 Government Deficits Make Investors Cautious

In the long run, the growth of provincial deficits and debt is slightly unsettling for investors. While current provincial deficit levels may be warranted given the need for important infrastructure spending, there is a feeling that the provinces require further financial discipline. Nonetheless, provincial bonds remain a "defensive investment" – though the subsequent increases in provincial debt may trigger ratings downgrades and constrain the ability of domestic investors to absorb incrementally more debt.

6 Expect Lower Global Growth Amid Trade Tension

Escalating trade turmoil (US-China in particular) and higher interest rates around the world pose concern for a sustained global economic slowdown. For issuers that have a greater proportion of international distribution, this could mean heightened volatility going forward.

7 SSA Markets Will be in Focus in 2019

While the markets have been turbulent in recent years for sovereign, supranational and agency (SSA) borrowers, compelling spread premium is expected in 2019. With the winding down of the European Central Bank's quantitative easing program, it is anticipated that SSA spreads may widen; greater price discovery may be needed in primary markets.

Interest rate differentials will continue to favour Canadian dollar investments globally and that is a trend that may in fact grow in 2019 as Canadian and US growth diverges from other developed markets.

Roundtable Participants

Rod Balkwill
Executive Director, Treasury Management Branch, Ministry of Finance, Province of Saskatchewan

Andrew Bastien
Director, Liquidity and Funding, Treasury, PSP Investments

Alex Caridia
Managing Director and Head, Government Finance, RBC Capital Markets

Susan Love
Vice-President and Treasurer, Export Development Canada (EDC)

Randall Malcolm
Senior Managing Director and Portfolio Manager, Canadian Public Fixed Income, Sun Life Investment Management

Nicolas Moreau
Director General, Funds Management Division, Financial Sector Policy Branch, Department of Finance, Canada

Anna Pal
Senior Principal, Ontario Teachers' Pension Plan Board

Guillaume Pichard
Director, Capital Markets, Ministry of Finance, Province of Quebec

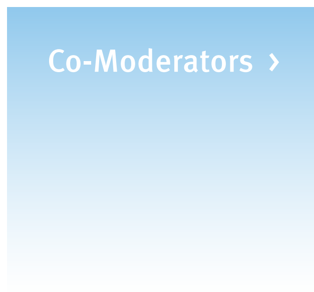
Jigme Shingsar
Managing Director, US Debt Capital Markets, RBC Capital Markets

Dominic Siciliano
Vice-President, Portfolio Construction, Active Duration, Addenda Capital

Garry Steski
Assistant Deputy Minister, Province of Manitoba

Louise Stevens
Treasurer, Canada Mortgage and Housing Corp. (CMHC)

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



Mark Chandler
Managing Director, Head of Fixed Income and Currency Research, RBC Capital Markets

Dawn Desjardins
Deputy Chief Economist, RBC

Roundtable Discussion

Canada's Federal and Provincial borrowers remain optimistic amid new challenges on the horizon

In November 2018, RBC Capital Markets (RBCCM) brought together key market participants for a roundtable discussion on the key issues, challenges and opportunities in today's public sector markets, domestic and offshore.

Canada's borrowers faced a slower economy in 2018 compared to the previous two years, but it progressed at a steady pace nonetheless. Domestic growth was less reliant on the consumer and household sectors – transitioning to business and export growth. 2019 is not without its challenges – reduction in global growth, uncertainty around slowing productivity across select provinces and how that will impact the national economy, and a question of how heavily-indebted consumers will fare in a higher interest rate environment were some of the concerns that borrowers and investors in Canada's public sector bond markets expect to face in the year ahead.

Dawn Desjardins, RBC: What is on your radar as an economic backdrop for 2019?

Nicolas Moreau, Department of Finance: We see the economy progressing in line with what we have seen in 2018. After growing near 4% between the second half of 2016 and the first half of 2017, the Canadian economy has moderated to a more sustainable pace, growing at an average rate of around 2% over the past four quarters – a pace near the economy's estimated potential growth rate. Indications that the Canadian economy is operating close to its full potential have started to build: the unemployment rate has remained near a 40-year low for over a year, wage gains have been fairly robust, and businesses have reported more difficulty finding workers to fill vacancies.

That said, the Canadian economy is well-positioned for continued growth. Canadian consumer and business confidence remains elevated. Trade is expected to become more of a positive factor as Canadian exports continue to benefit from faster US growth and spillovers from the current fiscal expansion in that country. The approval of the $40-billion LNG project will also provide additional boost for the economy.

Overall, despite the recent moderation of economic activity to a more sustainable pace, Canada's real GDP growth is still expected to be among the fastest of G7 economies in 2018. Reflecting an economy operating at its capacity and growing in line with its long-term potential growth rate, private sector economists are forecasting real growth around 2% for this year and next. This outlook is consistent with most recent forecasts from other institutions, like the Bank of Canada, the IMF, and the OECD.

CANADA
- 2019/20 Borrowing Program: ~C$115.0 Billion
- Auctions Terms Include 2, 3, 5, 10, 30, RRB[1] and Ultra-Longs
- Non-Resident Holdings of GoC Bonds: ~33%[2]

Nicolas Moreau, Department of Finance, Canada

Desjardins, RBC: Do you see anything coming down the pipe that we should be taking into consideration or think that we are being too optimistic about?

Stephen Thompson, Province of Alberta: We had a fairly significant year in 2017 with 4.9% GDP growth and we are not forecasting that for 2018. We have not had time to fully assess the impact of the WTI/WCS differential for the rest of the fiscal year, though we did forecast that it would widen substantially in 2018. What

1. RRB denotes Real Return Bonds (inflation-linked)
2. Based on Statistics Canada

we are seeing is a market response right now. We are seeing production declines from some smaller producers, but we do not expect that to really impact exports. Demand is still strong. The problem we have is transportation so the supply side is correcting right now.

In terms of other areas of the economy, we have actually seen fairly significant growth in exports outside of the energy sector – about 8% growth in non-energy exports for the first half of the fiscal year, which is encouraging. We are forecasting about 2.6-2.7% GDP growth in 2019, but have not adjusted for the recent market corrections.

Guillaume Pichard, Province of Quebec: We had a fantastic 2017 with 2.8% annual GDP. For 2018, our forecast is 2.5%. For 2019, we see a return to the normal growth for GDP, which we estimate around 1.8%. Overall, we are optimistic. The consumer has been very resilient in Quebec. Wages and salaries have picked up and the economy is doing fairly well despite trade tensions with the US. Tariffs are on our mind – especially those on aluminum, which we will need to resolve in the medium term.

Rod Balkwill, Province of Saskatchewan: In 2018, Saskatchewan's main economic drivers of agriculture, potash and oil, all came in as expected or a little better. It was in the consumer related sectors, which are smaller relative to other provinces, that we started to see some weakness. There is a little bit of a hangover from overbuilding on the residential side – house prices have declined and construction has levelled off quite a bit – and we are also seeing slowing retail sales growth which I think are somewhat related. But the province's main sectors remain pretty strong so it may be a marginal downgrade for 2018 from what we expected, but a bounce back in 2019.

Rod Balkwill, Province of Saskatchewan

Garry Steski, Province of Manitoba: We agree. Our GDP growth tends to be fairly stable around the 2% level. In 2017, we were around 2.2%. We are expecting 1.8% in 2018 and 1.7% in 2019. In 2017, we had fairly good retail sales growth and in 2018 we are seeing strong manufacturing sales and international exports are at their fastest pace since 2011.

Mark Chandler, RBCCM: As for our financial forecast, we see the Bank of Canada continuing to hike rates. We had forecast three rate hikes by the Bank of Canada in 2018 and that is where we ended up. We have the Bank of Canada stopping before they reach the bottom end of what they presume is the equilibrium rate (2.5-3.5%) at about 2.25%. The rationale for that is we see a slowdown in the consumer sector and that could last for about six months. One area that we did not get quite right in 2018 was the curve ended up flatter than we thought, not dramatically so, but still flat relative to most other countries. We are starting at too flat a level[3] and we see pressures rising at the long end. This is primarily driven by pressures in the US that include a very strong consumer, rising inflation and more pressure from the Feds to unwind its balance sheet. We look for longer-term yields to drive higher into 2019 as well. It is not dramatic, but we still believe it is worth about 30-40bps at the long end. That is our base case – do people agree?

Mark Chandler, RBC Capital Markets (Co-Moderator)

Moreau, Department of Finance: The Department of Finance Canada regularly surveys private sector economists on their views on the outlook for the Canadian economy, including the future path of interest rates. The average of the private sector forecasts has been used as the basis for economic and fiscal planning by the Government of Canada. In terms of flatness of the curve, it is hard to read what is causing it. Is it an expectation of weaker future growth than what we are seeing right now or are there other factors in the market pushing the curve down such as QE? Also, we may not have seen as much issuance down the curve as we have seen in the past few years, so it is hard for us to clearly identify what is driving the flatness.

Chandler, RBCCM: Is it inescapable that we will continue to see flattening or can we get higher longer-term yields? Are some of the factors that are driving the lower-term yields likely to be in place in 2019?

Dominic Siciliano, Addenda Capital: If we have a recession scenario, we could see the curve flatten a little more prior to the negative growth storyline, but it is not our base case. 2019 is about the search for the neutral rate because we are not sure that the central banks have a good handle on what that neutral rate is. And they tend to overshoot or go under so we are focusing on the impact of this on the economy. As a portfolio manager, I am not paid to hold longs at this point. So, we are constructing our portfolios with steepeners since there is no cost or it is minimal. I would love to see 30bps in the 10s/30s.

Randall Malcolm, Sun Life Investment Management: Pensions with long-term liabilities are paid to hold the long end. The US Pension Benefit Guaranty Corporation have upped their pension

3. Based on discussion in mid-November, 2018

insurance rates so that has added a lot of pressure on pensions to increase their funded status – and the equity markets have helped out as well. With pensions getting more fully funded, there is much more interest in long-term debt. We have seen some of that coming through our LDI and annuity businesses. I am more on the total returns side and I try to see the flow of business going on across the room from me and take a more fundamental outlook, which does not really justify the curve bending so far over sometimes.

Chandler, RBCCM: Does that fit with what you are seeing at Ontario Teachers' Pension Plan?

Anna Pal, Ontario Teachers' Pension Plan: Yes, there is definitely still strong demand in the long end of the curve from LDI-types. In terms of issuance coming from the US, obviously they have a lot to issue but I feel like most of that has been priced in already. In the front end of the curve, in both US and Canada, it is all about trying to find the right neutral rate, which is going to be very data dependent. If they get to 2.5% or 3%, I would not be surprised if they try to take it a little bit higher to have more of a buffer for a time in the future where they may need to cut rates.

Chandler, RBCCM: What impacts do you believe NAFTA 2.0 and the US will have for Canada?

Dawn Desjardins, RBC: The trade deal was not enough to change our forecast. Perhaps the bigger impact in 2018, and the year ahead, is confidence. Businesses were feeling a bit uncertain about how much they should be investing. The Business Outlook Survey told us that they were going to invest and we believe we will continue to see that investment. That is how we get to 2% growth in 2019. As in any trade deal, there are winners and losers. Obviously, the dairy quota was something that had to give but, in return, tariffs on autos were absolved. That was the win from that perspective.

Dawn Desjardins, RBC

Pichard, Province of Quebec: Every province has a stake in trade with the US - we all have this huge market next to us that we cannot avoid and the US also cannot avoid trading with Canada in many sectors. In Quebec, we are happy a deal was reached. Tariffs on steel, aluminum and some still on softwood lumber represent three issues that we want to follow up on with the US. Free trade in these three areas will benefit both the US and Quebec. With dairy, we have to look at the pace of going from a quota market to a more open market and keep an eye on the federal government's help. If we move quickly to a more open market and if there is no real help from the federal government, we might end up in a situation that impacts the farmers.

Susan Love, EDC: There is relief the deal has happened as people do not like uncertainty. In terms of exports, they continued to grow at a good pace in 2018 and were still up by 8% prior to the announcement of the agreement. In terms of investment, some businesses were holding off until a deal was reached with our biggest trading partner (over 75% of our exports are going to the US). Given the pent-up demand for investment, this should result in an influx of investments and trigger a knock-on effect to the rest of the economy.

Thompson, Province of Alberta: In Alberta, we are probably the least affected province in the country because energy is exempt. Even if this deal had failed, we would have gone back to WTO rules so we are not terribly worried.

Balkwill, Province of Saskatchewan: Saskatchewan has lower level exposure to the US compared to other provinces, and the big areas – namely oil, potash and grains – were not affected. That said, we have a large pipe mill so the steel tariffs hurt. Furthermore, they have gone to Section 232 on uranium. While it is good that a deal was reached, there are still trade stresses on certain industries.

Chandler, RBCCM: The first of three risks we see to the outlook is the reduction in global growth. What is RBC's view?

Desjardins, RBC: The IMF forecast has taken it down about two-tenths to 3.7%. That is the steady state now for the global economy despite the fact that the US seems to be powering on with the fiscal stimulus they have in store. Over 2018/2019, they took Europe down a little so that may be of some concern. They agree that Canada is pretty steady at about 2%. In 2019, they do think that China's economy will be weaker than previously thought.

Chandler, RBCCM: Is there a risk of global growth slowing significantly? Do you see it as a big threat and if so what regions are on your radar?

Pal, Ontario Teachers' Pension Plan: We do not see it as a big threat but definitely a risk. Of course, we are concerned about emerging markets (China) as things could go very wrong there, but it is not our main case at this point.

ONTARIO TEACHERS' PENSION PLAN BOARD

- Largest Single-Profession Pension Plan in Canada with C$193.9 Billion in Net Nssets[4]
- Asset Mix Includes Equities, Fixed Income, Inflation Sensitive Assets and Real Assets

Anna Pal, Ontario Teachers' Pension Plan Board

4. As of June 2018

Malcolm, Sun Life: For us, global growth is always a concern. We are primarily concerned with coming back to the neutral zone for rates and how that unwind happens because it impacts all asset classes. We look at the appreciation of the US dollar, its impact on emerging markets and how all of those pieces are going to work together. It is a concern but we also realize that the terminal growth is probably a lot lower than it has been in recent history and wonder what that means for all of the global rate structures moving forward.

"We also realize that the terminal growth is probably a lot lower than it has been in recent history and wonder what that means for all of the global rate structures moving forward."

Chandler, RBCCM: PSP Investments recently opened up offices overseas. Do you see risks in some of the places that you are operating in?

Andrew Bastien, PSP Investments: We have been opening offices internationally for the last few years and now have offices in New York and London to enhance our private market asset class capabilities. In 2019, we are going to open an office in Hong Kong with the intention of building a hub to enhance local deal-making networks in Asia so we can further scale our investments in the region. Given the size of the Asian market and the investment opportunities, Asia was a logical next step for us. We think it is important to have a local presence in Asia to deepen our understanding of that market, to source the right investments and determine how much of our portfolio we want to allocate to the region. The potential risks we see in Asia revolve around how a cyclical economic slowdown in the region could be a source of potential instability to equity and currency markets.

PSP INVESTMENTS
- 2019/20 Borrowing Program: ~C$2.0 Billion
- One of Four Federally-Owned Canadian Crowns
- Issued C$1.25 Billion 7-Year in 2018

Andrew Bastien, PSP Investments

Chandler, RBCCM: The second big risk is oil. What are the risks as they relate to Alberta in terms of growth and the revenue outlook with both the movement in WTI and the spread differential?

Thompson, Province of Alberta: In terms of WTI, the big impact we see is on provincial royalties. Currently, royalties are about 20% of our revenue sources and during peak oil prices it was 25-30%. So, we have already seen a loss of revenue and that is why we are a big borrower – it is the only way we can fund ourselves. US demand for Canadian heavy oil is still very strong. Our problem is not supply but getting supply to market. What we are seeing right now is a pipeline network working at capacity with very little room to put more oil into pipes with rail also running at capacity.

Our budget forecasts are built around the return of a normal differential. We were not surprised by the level of the current differential and had factored it in due to known refinery outages. The problem is, once those refineries come back online they take some of the capacity out, though we are still seeing pretty large stocks of oil in Alberta. We do not see the differential returning to the $10-$12/barrel range for several years as we would need pipelines online for that to happen. Moving by rail adds significantly to the cost and we do not have the capacity to take it by rail anyway. The differential right now is affecting corporate profitability, meaning some of the producers are not able to move as much product as they would like. Some have planned for that but we are seeing a reduction in production that could be concerning going forward.

Chandler, RBCCM: Saskatchewan often gets lumped in as an oil and gas producer but when you look at the resource revenues as part of your total revenue, it is only about 10% – and only about half of that is oil and gas. Is it fair to say people overplay that sensitivity?

Balkwill, Province of Saskatchewan: Yes, I think that is fair. On the margin, the market clearly correlates Saskatchewan spreads to oil prices, and that may create mispricing based on underlying fundamentals of the province. The volatility of WCS and WTI make for some trading opportunities which the market seems to enjoy. But taken from an overall economy perspective, there is less exposure than Alberta. Of note, there is also a difference in the heavy/non-heavy mix of oil produced – Saskatchewan produces 60% that is non-heavy which operates in a different pricing market and pipeline infrastructure than WCS.

Chandler, RBCCM: The third risk revolves around the consumer. What if we get the higher interest rates that we are suggesting? How will households perform?

Desjardins, RBC: Housing affordability is at the worst level since the 1990s. Vancouver, Victoria and obviously Toronto are extraordinarily unaffordable. The bank's recent financial stability hub indicated that even if prices fell by 20%, the financial system would not have a lot of undue stress. The GDP hit is a lot more material because we have so much leverage. Different regulations have been introduced and interest rates have moved up. This has caused a very big adjustment in the housing market. It will progress but we are not going back to those very high levels of activity seen in 2016 and most of 2017. Instead we have a pretty level view of how we see the housing market going forward. Prices will probably increase at the low single digits but with interest rates going up, that affordability crunch is definitely an issue that will continue.

Louise Stevens, CMHC: We are also expecting housing to moderate into 2020. Housing starts have been declining from the 2017 highs and resales are moderating. Slower growth and prices are more in line with fundamentals. Toronto and Vancouver continue to be flagged as potential vulnerabilities, mostly because of evidence of overvaluation. We believe the overvaluation revolves around a supply issue – having the right kind of supply to relieve pressure and bring prices more in line. On the flip side, in the Prairies we see a large amount of over-supply.

Chandler, RBCCM: Any comment on the portfolio in a case where interest rates are rising and housing prices are falling?

Stevens, CMHC: Our insurance portfolio is very strong. We look at the average equity in the portfolios with respect to the high ratio transactional business, where people do not have the 20% down payment to put down, and that is around 39%. If you look at our portfolio or low ratio insurance, it is around 68%. If you look across both those, our average arrears rate is around 0.27%. That is very strong and reflects a lot of the work that has been done in terms of improving underwriting standards by putting in stress tests and other measures the government has taken when determining underwriting requirements.

Louise Stevens, Canada Mortgage and Housing Corp.

Chandler, RBCCM: How large is the insurance portfolio? Is there any impetus now to minimize growth in the future?

Stevens, CMHC: With successive rounds of regulatory changes and stronger competition, we have seen a decline in business, which was expected. Following the credit crisis, our market share reached around 90% and our total insurance-in-force peaked near $575 billion as competitors shrank and lenders sought the added value of the 100% CMHC guarantee. As things have normalized, we now have around 50% market share and our insurance-in-force is closer to $450 billion which gives us a cushion to fill the void should there be another crisis. As it stands now, we think having viable competition is good for the overall stability of the system and are comfortable with our current footprint.

Chandler, RBCCM: What do investors abroad think when they look at Canada? Do they look at the relative situation as fairly benign or do they look at where we are in the cycle and ask if we should be closer to a balanced budget?

Jigme Shingsar, RBCCM: Canada has obviously been a good story for quite a while, basically from the financial crisis onwards. Initially, when people were searching for a question about potential issues, housing was usually the only thing they could come up with. Since then, there have been other things to query such as household debt levels and energy prices. More recently there have been more questions about fiscal performance. People have noticed that the federal budget deficit should be smaller. Not pointing to it as a concern from a standpoint of capacity but it does not look quite as rosy as it did. That is even before you put it in the context of the low unemployment rate. However, most people have larger concerns outside of Canada – like Europe, Brexit, China or trade issues – which work in our favour. Obviously, we had a period where NAFTA was a big concern, but most people expected that there would be a resolution.

Jigme Shingsar, RBC Capital Markets

Moreau, Department of Finance: Canada has a net debt-to-GDP currently at 24% – the lowest of the G7 countries by a significant margin – so investors are very comfortable with our current fiscal situation. At the federal level, the Government of Canada continues to receive triple-A credit ratings, with a stable outlook, from major rating agencies due in part to its favourable fiscal position. Those rating agencies indicate that strong political institutions, economic resilience and economic diversity, a well-regulated financial market, monetary and fiscal flexibility, as well as the country's effective, stable and predictable policy-making also support Canada's triple-A credit rating.

The federal government continues to believe that fiscal policy has an important role to play in expanding the Canadian economy's growth potential over the long-term. The fact that we are investing for the future makes a big difference when we explain to investors the sources of the deficits. That said, while the government is expected to run small deficits over its budget planning horizon, the government is expected to maintain its downward deficit and debt ratio track – preserving Canada's low-debt advantage for current and future generations.

Chandler, RBCCM: Can you review what we have had on the provincial side in terms of domestic issuance in 2018?

Alex Caridia, RBCCM: 2018 has been fairly stable in terms of issuance volume. Currently, we are standing at about $113 billion on calendar year 2018 compared to $105 billion in 2017. In terms of overall backdrop, it has been relatively benign in investment grade credit. We've seen provincial spreads on the year widen anywhere between 5-10bps and CMB spreads around 1-2bps[5]. Most of the issuance we have seen has been very well received. One trend is more domestic issuance at the expense of offshore with domestic

5. As of mid-November, 2018

issuance running at about 75% of total funding right now. That number was higher in 2017 at around two thirds of issuance. We did see some peculiarities in 2018 with Ontario, Quebec and to a lesser extent New Brunswick funding patterns and frequency of issuance impacted due to election blackouts.

Chandler, RBCCM: From the investor side, when you think about provincial credit, are there specific spread levels that you have in mind? Do you look at how it has traded relative to broader corporate credit or do you see it as a defensive place to hide in terms of spread product?

Malcolm, Sun Life: It can certainly be a defensive place to hide. With credit fundamentals, we do see downgrades. An interesting correlation exists between an increase in provincial debt and our ability to absorb it. There are more provinces now with negative outlooks and as those go through, it actually crunches us down in our purchasing limits and that is definitely a challenge as provincial issuance rises. What I like with the provinces, especially Ontario, is the long-term debt matching funding for long-term projects. When we talk about funding for infrastructure, the big challenge I find at this point in the cycle is that we are still facing deficits in most provinces. But the one problem that I do have at the provincial/federal level is that we talk about an operating

SUN LIFE INVESTMENT MANAGEMENT

- Manage Private Asset Class Pooled Funds and Liability Driven Investing Strategies for Pension Plans and Institutional Investors
- Involved in Managing ~C$146 Billion in Assets for the Sun Life Financial Group of Companies

Randall Malcolm, Sun Life Investment Management

budget and a capital budget. Is it completely naïve to expect a return from an infrastructure investment (capital projects) that would provide future surpluses that could then be used for debt reduction? I want to see that it (capital projects) will increase the tax base going forward and it is going to move us more toward decreasing the debt. In Ontario, we talk a lot about that because we have seen the debt increasing more than the reported deficit would justify. While switching from corporates to provincials might be viewed as a short-term move to safety, longer term I do not see the discipline to stop the increasing provincial debt levels.

Siciliano, Addenda: Good point. We never used to talk about provinces as a credit. We tend to treat the work we do internally now more like a credit since 2008. When we look back at previous

"2019 IS ABOUT THE SEARCH FOR THE NEUTRAL RATE BECAUSE WE ARE NOT SURE THAT THE CENTRAL BANKS HAVE A GOOD HANDLE ON WHAT THAT NEUTRAL RATE IS."

– DOMINIC SICILIANO, ADDENDA CAPITAL

crises, the provinces do pretty well if there is no 'great' shock. They trade in a tight range and are a good defensive play. What worries me going forward is the quantity of internationals that are in provincial paper. Now we have to be focused on international relative value trades to evaluate our market. Consequently, we have to look at it more from a flow perspective and I would expect to see an increase in volatility in provincial spreads. We have opened up our market to internationals, which is a good thing, but it could also be a double-edged sword when the flow reverts.

Caridia, RBCCM: I agree and actually expect to see more international demand emerge because we are going to diverge from Europe and Japan in terms of rates. I expect Canada to become much more attractive as an investment proposition for yield focused investments.

Alex Caridia, RBC Capital Markets

Chandler, RBCCM: The Bank of Canada is continuing to hike rates and that affects costs. How does that factor into your funding decision?

Thompson, Province of Alberta: In Alberta, we have been relying on fairly significant foreign demand for our bonds. We do recognize over the past four to five years that we have introduced a tremendous supply of bonds into the domestic market. Most other provinces have a fairly stable stock but we have gone from $30 billion and we will probably hit $100 billion in gross debt to the market before we max out according to current plans. The domestic market has been fantastic when it comes to snapping up really large quantities of bonds but we would not want to dump all of it domestically. I am always amazed at how much we can issue into the long end in Canada. We are not particularly rate sensitive because we do not have the ability to be so when it comes to funding. We rely on borrowed funds to meet our operational requirements. When we go offshore, we are probably a little more accommodating than other provinces. We pay attention to arbitrage but are not solely focused on it.

Chandler, RBCCM: Garry, how do you balance the notion that one shows up more regularly if developing a new client base abroad versus an opportunistic move?

Steski, Province of Manitoba: For international issuance, we look at it from a cost effective basis. Our program is small enough that we believe we can probably obtain all of our funding needs in Canada. We therefore use the international markets when it is cost effective for us to do so. This past year has not been cost effective so we have done very little international issuance. However, as an opportunity presents itself, we will look at it.

Chandler, RBCCM: Guillaume, you are a more regular overseas issuer. What are you seeing?

Pichard, Province of Quebec: Concerning Asia, issuing in yen has not been onside for us for at least five years. That could be one reason Asian investors are playing in the domestic market. The bond market in Canada has good benchmark size and any investor can play. One way we are able to reach Asian players is through the Australian market, which has been very good in the last few years. We also did two private deals in New Zealand in 2018 which was also a way to reach Asia. In 2018, the arbitrage was a little expensive, especially in dollars. It was hard to find a window where it actually made sense for an issuer to go out and print a global bond in dollars. From Quebec's point of view, the euro has been good. Another market we have been able to penetrate is the pound.

Chandler, RBCCM: Is there anything on the domestic market that has changed recently in the way you approach your issuance?

Pichard, Province of Quebec: Not really. Our strategy in Canada is to issue large benchmarks so that is what we have been focusing on, especially 10-year and long bonds. We had lower requirements in terms of borrowing so we put our energy into our benchmarks, which we feel give investors greater value than doing private MTN deals. We are able to put liquidity there and I think it is a formula that works. Going forward, we are not going to play on the far-end short term; we are going to keep building up our 10-year benchmarks and if we get a good window in the market, eventually we will open up a new long bond.

QUEBEC
- 2019/20 Borrowing Program: C$13.2 Billion
- Active Green Bond Issuer in CAD
- Active in 2018 Across CAD, EUR, GBP, AUD and NZD

Guillaume Pichard, Province of Quebec

Thompson, Province of Alberta: We are also focused on liquidity, which allowed us to access Canada so effectively. What we have seen in 2018 is a decline in large orders. One of the things that allowed us to grow the program quickly and to move to larger benchmarks is the carve-out orders from some of the larger investors, which have allowed us to grow from $500-600 million to $1 billion per issue. Those carve-outs have by and large dried up so we are expecting a reduction in our average deal size. That is another reason to go offshore. The convention in Canada to reopen is really helpful and allows us to give those clear pricing points on the curve. That is why our initial focus was domestic because, prior to Alberta having significant debt stock in the market, we were

difficult to price given the odd points of debt and cheap points in the curve. Now Alberta has a well-defined curve that is clear and tradeable so it gives us a good base to launch into other markets.

Malcolm, Sun Life: We are not a big carve-out buyer but I did find the amount of debt that is outstanding now interesting, especially in Ontario and Quebec. The one saving grace with this debt is their ability to move it through the market. We are a regular market participant and have no trouble finding Ontario and Quebec debt. The carve-outs have maybe dried up a little bit but it has been very smooth. It is a testament to the larger provincial issuance desks to move that much debt through the markets with minimal market impact. The provinces have become very efficient at funding and very efficient at funding globally, but where is that marginal buyer coming from and how is that going to impact us?

Siciliano, Addenda: As an investor, I really appreciate liquid benchmarks as we are more active – it enables and stimulates liquidity. The book building business has changed a little, so that helps with the smoothing process.

ADDENDA CAPITAL

- One of Canada's Largest Multi-Asset Investment Firms that Looks After Pension, Private Wealth, Insurance, Corporate and Foundation Assets
- Over C$27 Billion Under Management; Actively Manages a Wide Range of Asset Classes, Including Fixed Income, Equities and Commercial Mortgages

Dominic Siciliano, Addenda Capital

Caridia, RBCCM: Have you seen any trends in terms of your composition of investors?

Stevens, CMHC: It has been fairly consistent – around one third of our issuance goes outside Canada on new issue. What we have seen of late is a bit of a redistribution happening in the secondary markets where we are seeing more and more international investors coming in and purchasing bonds in the secondary market. Roughly half of our outstandings are held outside of Canada – an interesting trend. Broadly speaking, we are always looking to expand our investor base internationally and domestically, although the potential is more international.

Chandler, RBCCM: We know that central banks favour CMBs – is there another investor class showing up more?

Stevens, CMHC: Central banks are certainly a huge component of our international distribution. To be honest though, we have actually seen a bit of a decrease in terms of ticket size that central banks are taking in our primary process. We expect that might have a lot to do with why we are seeing this redistribution happening in the secondary market.

"What we have seen of late is a bit of a redistribution happening in the secondary markets where we are seeing more and more international investors coming in and purchasing bonds in the secondary market."

Chandler, RBCCM: Louise, does that redistribution concern you at all – the potential for volatility?

Stevens, CMHC: No, ultimately it is demonstrating that our bonds are broadly placed. We see the same trend happening in Government of Canada securities. There seems to be strong demand for Canada.

Chandler, RBCCM: Nicolas, if you look at 2018's gross issuances, it is quite a bit lower than we've seen in recent years. One thing that was brought up in the debt management consultations was this idea that at the long end of the curve, we have had inverted 10s and 30s. What are your thoughts on that?

Moreau, Department of Finance: We have had quite a lot of discussions about that with our primary dealers and investors – the market would like to see more 10s and especially more 30s. We had planned for a relatively smaller bond program in 2018 across all sectors and we were surprised with lower-than-expected financial requirements partially due to higher revenues, which also caused our shock-absorbent T-bill issuance to decrease significantly. This environment makes it difficult for us to adequately supply all sectors to maintain well-functioning markets. Increasing 10s and 30s issuance may solve some of these problems today, but it could lead to even larger problems in the future by drying out potential issuances in the years to come. Regarding the inversion of the 10s and 30s, we believe maintaining the government's reputation as a stable and predictable issuer is more beneficial over the long-term than changing the bond program mid-year to increase 30-year issuance in an attempt to take advantage of temporary market developments.

Chandler, RBCCM: Susan, do you want to touch on some of the trends you see in international issuance?

Love, EDC: Globally, there continues to be great demand for Canadian names. Our investors are primarily international with the exception of our recent Green Bond, which attracted a number of Canadian investors as this was the only time we have issued in the domestic market in the last 10 years. When comparing Canada's debt-to-GDP levels to other countries, foreign investors see that we are in great shape. This positive outlook has allowed Canadian issuers to take advantage of more issuance opportunities as we continue to attract strong demand from the international investor community with increased participation from emerging market investors.

Chandler, RBCCM: Is it going to be easy to sell bonds from Canadian issuers in the European market if and when interest rates go up in Europe?

Shingsar, RBCCM: We have talked about concerns in Canada but at the margin really there is no capacity problem with regard to Canadian issuer debt, whether in Canadian dollars or other currencies. All that would do is maybe change issuance patterns in the SSA market away from the euro towards dollars. If you look at historical issuance patterns in SSAs, the number of European SSA issuers that until recently have never issued a euro benchmark is remarkable. It speaks to what markets have historically been – the most cost-effective.

Chandler, RBCCM: Do you think there is any room in asset growth for fixed income just on the reallocation away from equities and towards fixed income?

Malcolm, Sun Life: It is going to be challenging. A lot of us in the room are benchmark-centric, but across Canada, most individual investors are just concerned with total return. I do not see you getting that out of fixed income in the near term, although the front end is starting to look attractive.

Pal, Ontario Teachers' Pension Plan: A lot of investors are still waiting for higher yields to make that switch. For us, over the long-term, our total fund target is 4% plus CPI and real yields in Canada are still under 1%. We are still waiting but eventually risk premiums might come back into the curve and then it may make sense to add to the asset class.

Chandler, RBCCM: Andrew, you see yourself as a pretty safe credit in the spectrum. Do you see PSP benefiting in the move where people are a little worried about hairier credits?

Bastien, PSP Investments: Absolutely. When everything is going well and credit spreads are compressing, we see less differentiation between the good and the bad credits. The same happens inversely when there is a blowout in credit spreads. In this scenario, investors differentiate between the higher quality credits and the lower quality ones, and the higher quality credits should see a significant outperformance.

Chandler, RBCCM: Does the recent legalization of marijuana impact your revenue outlook?

Thompson, Province of Alberta: We did the math and it is currently a net expense for us. Between increased police training, municipalities asking for more funding and delivery channels that have had to be built, I do not believe there is a province in Canada relying on this as a revenue source.

Pichard, Province of Quebec: We have looked at it exactly the same way. It will be very difficult to be able to make a profit. The idea is really to protect young people and create awareness.

Chandler, RBCCM: Can you give us an update on the Green Bond market in Canada?

Caridia, RBCCM: Green Bonds grew to $6.3 billion in 2018 from $1.9 billion in 2017. Canada is a bit behind the curve, in the sense that the very first Green Bond in Europe was issued in 2007 and the first Green Bond in Canada was not issued until 2014. More investors in Europe are engaged in the topic. In terms of the number of deals in Canada, we have seen 11 in 2018 vs. 4 the previous year. We probably spend 20% of our time talking about Green Bonds and it is definitely not 20% of issuance. Overall, Canada is about 5% of the global Green Bond market – fairly small but more and more investors are becoming engaged in Canada as well.

Siciliano, Addenda: For us, it is always a question of value but we do believe if they are good projects and they are done properly, it is a better economic situation for everyone. We do not buy things just because they are green or ESG but we do want to help contribute to that market. We have a dedicated team, which evaluates each project before we invest. The work does not stop there since you need to ensure the issuer is reporting and using the proceeds appropriately. We are willing to give a couple basis points on a deal that makes sense but we will not participate at any cost unless it is investment-policy driven.

Chandler, RBCCM: Are there plans to increase Green Bond issuance or stick with the status quo?

Thompson, Province of Alberta: There is no official view from Alberta on Green Bonds. We do have a government that is focused on environmental, social and governance issues, though the way they are achieving those goals is through spending. As a treasurer, I continue to believe that the more effective way of achieving those goals is through social spending, not through financing – unless you are providing financing for something that would not otherwise be done.

Stephen Thompson, Province of Alberta

Pichard, Province of Quebec: One of the challenges we have in the Green Bond market is having enough infrastructures to fund. We are not running deficits and therefore will not issue debt to support social programs (funded with income tax revenue) so social bonds are out of the question. The first issues we did were public transit, which have big infrastructures and products that are common sense green projects.

We would love to offer more, but we need to get enough infrastructure projects that qualify for our Green Bond program and this takes time.

Love, EDC: In terms of our plans, we remain committed to issuing Green Bonds. I agree – the market has been a little slower to develop in Canada so with the issuance of our Green Bond in Canadian dollars we hoped to attract some international attention. We were pleased to see after we issued our bond that Green Bonds were also issued at the municipal level in Canada – so now all three levels of government are issuing. There is plenty of demand from investors, who are seeing that it makes sense to invest in something that is appropriate from a CSR point of view. When we first started issuing Green Bonds around five years ago, it was more of a niche market. It is now mainstream and I expect the market will only continue to grow.

EXPORT DEVELOPMENT CANADA

- 2019 Borrowing Program: ~C$10.0 Billion
- Active Green Bond Issuer in USD and CAD
- Active in 2018 Across USD, GBP, AUD, NZD, CNY and NOK

Susan Love, Export Development Canada

Malcolm, Sun Life: It does seem like as an issuer you get a better reception in Europe. There are more ESG-focused funds there. Sun Life has a sustainability strategy so we are more of an ESG investor rather than just Green Bond focused. The most interesting challenge for us was Ontario where we had some pretty significant issues with the governance. On one side they are a Green Bond issuer and on the other hand they are creating the Fair Hydro Trust – going against their auditors' recommendations. That was a red flag for us.

Siciliano, Addenda: We are not talking only about Green Bonds anymore but ESG as a whole and investors want to see how it is integrated. Good managers are asking the provinces a lot of questions such as if you are building new trains, what are you cutting in your expense stream? Questions need to be asked since it has a direct impact on profitability of our institutions. We believe ESG will lead to lower costs and higher profitability in the long run.

Love, EDC: This type of issuance is helping to raise everyone's game, including ours. The questions we are getting from investors today are significantly different from those we received three years ago. Previously when considering an investment, most investors would focus on the credit rating but now they are looking at a whole lot more. This is a market where both sides, investors and issuers, need to co-operate to make it work.

Malcolm, Sun Life: In the beginning we had issuance from Quebec and Ontario that set the tone, and quite a tight tone for the rest of the provinces. These were very regimented programs and very well laid out. It is different in the US where we have seen a water company issue a Green Bond and not doing anything except telling you it is a Green Bond. There are also non-green companies issuing Green Bonds to fund specific projects. As a result, it has been easier to buy green in Canada because of those regimented programs and a bit more challenging in the US.

Chandler, RBCCM: We talk a lot about whether there is worry about being shut out of the market because of market movements. Are we being too complacent or is it time to build a war chest for when something does happen on that front again?

Thompson, Province of Alberta: We have moved to an environment where we are deficit financing so on the margin we are relying on debt markets to meet our operational costs. We have put in place fairly significant liquidity reserves – borrowing $5 billion and investing that in Canada/US T-bills. The idea there is simply to survive for a quarter in a case where we might be shut out of the market. We have seen events in the past that have made it very difficult to access funding. The cost of the province not being able to meet its commitments on any given day is too high to bear.

Malcolm, Sun Life: We are seeing the same thing in Ontario and Quebec where you would hate to see them shut out.

Thompson, Province of Alberta: In Alberta, we are fairly comfortably positioned. Debt servicing costs as a percentage of expenditures is incredibly low. We can run large deficits for a decade and not hit the levels of some other provinces, so we are not overly concerned with the debt burden but we are with access to funds at any given time.

Chandler, RBCCM: We went through a process with the federal government three years ago where we got to a level of foreign exchange reserves and liquid reserves we were happy with, and that has not changed. Does it need to?

"We are not talking only about Green Bonds anymore but ESG as a whole and investors want to see how it is integrated."

Moreau, Department of Finance: Canada's official international reserves total approximately US$80 billion, of which US$73 billion are liquid foreign reserves. This level is consistent with the government's commitment to maintain holdings of liquid foreign reserves at or above 3% of nominal gross domestic product. Liquid reserve assets are composed primarily of debt securities of highly rated sovereigns, sub-sovereigns, agencies and supranational organizations that borrow on public markets. Assets are in one of four eligible currencies, namely US dollars, euros, UK sterling and Japanese yen.

The statutory purposes of the Government of Canada's liquid foreign reserves are to aid in the control and protection of the external value of the Canadian dollar and to provide a source of liquidity for the government, if required. In turn, the level of reserves is reviewed on an annual basis to ensure that these purposes can be fulfilled.

Steski, Province of Manitoba: We try to stay well ahead of our needs. Cash flow and the amount of cash on hand plays a part in our decisions and we tend to stay three to four months ahead at all times. If we can get further ahead, so be it as we try not to get short on our cash needs.

MANITOBA
- 2019/20 Borrowing Program: C$6.4 Billion
- Focused on Issuing 10 and 30 Year Benchmarks
- Open to FRN and Ultra-Long Issuance

Garry Steski, Province of Manitoba

Stevens, CMHC: We have faced some pretty challenging markets in the past and have still been able to issue large size issuance. We are usually pretty confident when going into the market as we are fairly predictable and have a good sense of investor demand.

Pichard, Province of Quebec: Maybe we have become too complacent but it is hard to tell when and how the market is going to shut down. Following the financial crisis, we set up a liquidity fund, which was a very good idea. Like an insurance policy, there is a cost for it. But for us to know that we can go a long way even if the market is shut down is worth every penny.

Chandler, RBCCM: Jigme, are you seeing something on the issuance side that would give you any considerations by investors who might be seeing hiccups?

Shingsar, RBCCM: Not really. The bigger issues we have run into are issuer specific blackouts, which create a larger problem than any other market disruption. I do not believe there is a capacity issue generally speaking. Most of the time, when we look at international markets it is really on the back of capacity management in the domestic market. Issuers tend to look at achieving some cost savings, and if not, for market diversification and moderating your capacity usage of the domestic market. Usually with international markets, the biggest issue is self-imposed blackouts – elections and other things that are far more disruptive.

This does also go back to the question of fiscal situation we talked about earlier in the context of the global market. Canada is a great place, but over the last five years we have had more downgrades than we are used to seeing. If credit deterioration becomes a meaningful trend, then we could run into hiccups. But for now, investors remain quite receptive to Canadian SSA debt.

Malcolm, Sun Life: Ontario is issuing about C$1 billion every two weeks – a big issuance demand that I am not sure can be satisfied internally in Canada anymore. If the growth of debt outpaces GDP, we will see downgrades, which will further constrain Canadian investors and internationals as well.

Chandler, RBCCM: Is there some preferable split between foreign and domestic ownership of national and sub-national debt? We are currently sitting at 25-30% but is there an optimal balance?

Shingsar, RBCCM: All else being equal, you would tend to want more offshore ownership of your offshore issuances. If nothing else, you are paying for diversification so you might as well get it on all fronts. More foreign ownership of your domestic market is also a good thing given that it expands overall capacity but it can add to volatility.

Caridia, RBCCM: We had similar discussions in Australia on Kangaroo issuance. A decade ago, the market was about 30% offshore ownership of SSAs. Even at 30% offshore we had investors saying they would like to see more foreign ownership because it gives the banks an out when they see selling. I am not sure that there is an optimum level. Generally, the more diverse the ownership, the more liquidity you will see in a market.

Balkwill, Province of Saskatchewan: A question for the investor side — how do you look at rates moving higher? On the LDI side, is there a magic yield level number where funds may flow into immunized strategies and create a sort of top in bond yields? Is there a top in bond yields that gives us some comfort?

Malcolm, Sun Life: On the LDI side, I would say Canada has not been nearly as fruitful as the US due to the changes in pension insurance and the stock market in the US. When you have that kind of stock market appreciation combined with rates moving, you get some movement toward more LDI strategies. Canadian investors are more willing to sit on their hands. Hands are not going up for new issues but the hands are not pushing the bonds out either. The US is more interesting in that respect especially in commodity bonds like CNQ and SUNCOR bonds because they will swing way out. Investors in the US will hit the sell button really quickly and yet the new issue market is actually still pumping – I cannot explain that. In Canada, I do find that it has slowed down a little but we still have natural demand, although more challenging to execute.

Siciliano, Addenda: I agree – there has been an issue in trading the off-the-runs. For the other aspects, we have a lot of clients on buy paths and not too far from here in relative terms. The biggest risk to my business is the annuity business. They are effectively asking us to sell some longer dated fixed income to go purchase annuities. The issue is that I am managing long mandates with a 15-17 year duration. Some of the annuities have closer to a 10-12 year duration, so there is a bit of a curve trade.

Canadian Federal and Provincial Borrower Profiles

Needs and appetites for borrowing vary greatly between federal and provincial programs. To help understand the different key Canadian public sector borrowing programs and their characteristics, below is a comparison breakdown.

	ONTARIO	QUEBEC	ALBERTA	MANITOBA	SASKATCHEWAN	BRITISH COLUMBIA	NFLD & LABRADOR
PREMIER/CEO	Hon. Doug Ford	Hon. Francois Legault	Hon. Rachel Notley	Hon. Brian Pallister	Hon. Scott Moe	Hon. John Horgan	Hon. Dwight Ball
FINANCE MINISTER/CFO	Hon. Vic Fedeli	Hon. Eric Girard	Hon. Joseph Ceci	Hon. Scott Fielding	Hon. Donna Harpauer	Hon. Carole James	Hon. Cathy Bennett
CAPITAL/HEADQUARTERS	Toronto	Quebec City	Edmonton	Winnipeg	Regina	Victoria	St. John's
POPULATION ('000s)[1]	14,193	8,394	4,286	1,338	1,164	4,817	529
LARGEST SECTOR CONTRIBUTIONS TO GDP	Manufacturing, Real Estate, Finance	Manufacturing, Real Estate, Health	Oil & Gas, Mining, Manufacturing	Real Estate, Health, Manufacturing	Oil & Gas, Mining, Agriculture	Real Estate, Construction, Manufacturing	Oil & Gas, Mining
REAL GDP GROWTH (%)[2]	2.7	3.0	4.7	2.8	2.8	3.7	2.1
SHARE OF CANADA GDP (%)	39.0	19.4	15.5	3.3	3.7	13.0	1.5
BORROWING YEAR	Apr-Mar	Apr-Mar	Apr-Mar	Apr-Mar	Apr-Mar	Apr-Mar	Apr-Mar
RATINGS (MOODY'S/S&P)	Aa3/A+	Aa2/AA-	Aa1/A+	Aa2/A+	Aaa/AA	Aaa/AAA	Aa3/A
% CAD ISSUANCE (2018)	74%	80%	49%	95%	100%	100%	100%
RECENT INTERNATIONAL ISSUANCE	USD, EUR, GBP, CHF, AUD	USD, EUR, GBP, CHF, AUD	USD, EUR, GBP, AUD	USD, EUR, GBP, AUD	n/a	USD, EUR, AUD, INR, CNY, CHF, HKD	n/a
2018/19 BORROWING (C$BN)[3]	33.2	13.4	14.1	6.4	3.1	6.7	1.3
2019/20 BORROWING (C$BN)[3]	36.7	13.2	17.6	6.4	2.0	5.9	0.4
DOMESTIC TARGET TERMS	10 / 30	10 / 30	5 / 10 / 30	5 / 10 / 30	10 / 30	10 / 30	5 / 10 / 30
PUBLIC DEBT O/S (C$BN)[4]	352.5	211.6	65.6	47.0	18.5	56.4	15.2
FLOATERS PROPORTION	3.2%	8.6%	1.5%	4.7%	4.8%	2.3%	4.8%
ACTIVE ULTRA-LONG ISSUERS[5]	n/a	n/a	n/a	~C$1.1BN	~C$1.1BN	n/a	n/a
MIN. CARVE-OUT SIZE[6]	$600M (5yr) / $500M (10yr) / $400M (30yr)	$300M for 2.75% SEP2025, 4.25% DEC43s	$200M	Case by Case	$100M	n/a	$100M

Note: This data is current as of Dec. 15, 2018. (1) Based on available 2017 data. (2) 2018 Forecast based on RBC Research. (3) Unless otherwise noted. (4) Source: Bloomberg. (5) Issued between Jan. 2017 to Dec. 2018. (6) Large order protocol, order placed to one investor.

	NOVA SCOTIA	**NEW BRUNSWICK**	**PRINCE EDWARD ISLAND**	**CANADA**	**CMHC**	**EDC**	**PSP**
PREMIER/CEO	Hon. Stephen McNeil	Hon. Blaine Higgs	Hon. Wade MacLauchlan	Hon. Justin Trudeau	Evan Siddall	Benoit Daignault	Neil Cunningham
FINANCE MINISTER/CFO	Hon. Karen Casey	Hon. Ernie Steeves	Hon. J. Heath MacDonald	Hon. Bill Morneau	Lisa Williams	Ken Kember	Nathalie Bernier
CAPITAL/HEADQUARTERS	Halifax	Fredricton	Charlottetown	Ottawa	Ottawa	Ottawa	Montreal
POPULATION ('000s)[1]	954	760	152	36,708	n/a	n/a	n/a
LARGEST SECTOR CONTRIBUTIONS TO GDP	Real Estate, Health, Public Admin	Real Estate, Manufacturing, Construction	Manufacturing, Real Estate	Energy, Agriculture, Tech, Manufacturing	n/a	n/a	n/a
REAL GDP GROWTH (%)[2]	1.2	1.6	3.1	n/a	n/a	n/a	n/a
SHARE OF CANADA GDP (%)	2.0	1.7	0.3	100	n/a	n/a	n/a
BORROWING YEAR	Apr-Mar	Apr-Mar	Apr-Mar	Apr-Mar	Jan-Dec	Jan-Dec	Apr-Mar
RATINGS (MOODY'S/S&P)	Aa2/AA-	Aa2/A+	Aa2/A	Aaa/AAA	Aaa/AAA	Aaa/AAA	Aaa/AAA
% CAD ISSUANCE (2018)	100%	60%	n/a	100%	100%	0%	100%
RECENT INTERNATIONAL ISSUANCE	n/a	USD, CHF	n/a	USD, EUR	n/a	USD, CAD, EUR, GBP, AUD	n/a
2018/19 BORROWING (C$BN)[3]	1.4	2.3	–	~115.0	40.0	US$13.0	2.0
2019/20 BORROWING (C$BN)[3]	1.7	2.3	–	~115.0	40.0	US$12.0	2.0
DOMESTIC TARGET TERMS	10 / 30	10 / 30	10 / 30/ 40	–	5 / 10	3 / 5	3 / 5 / 7
PUBLIC DEBT O/S (C$BN)[4]	15.8	22.4	2.0	511.7	245.5	US$33.0	7.3
FLOATERS PROPORTION	17.2%	2.9%	–	–	21.6%	27.5%	–
ACTIVE ULTRA-LONG ISSUERS[5]	n/a	n/a	n/a	C$1.25BN	n/a	n/a	n/a
MIN. CARVE-OUT SIZE[6]	n/a	$100M	n/a	n/a	n/a	n/a	n/a

Note: This data is current as of Dec. 15, 2018. (1) Based on available 2017 data. (2) 2018 Forecast based on RBC Research. (3) Unless otherwise noted. (4) Source: Bloomberg. (5) Issued between Jan. 2017 to Dec. 2018. (6) Large order protocol, order placed to one investor.

Select RBC-Led Transactions

Every day, we partner with issuers and investors around the world to uncover funding opportunities and deliver superior execution with multi-currency distribution. Our client-centric approach leverages our global market expertise and insights to identify unique solutions to help clients meet their funding goals.

PSP Investissements Investments

CAD1,250,000,000
3.00% due November 5, 2025

(AAA/Aaa/AAA)

Joint Bookrunner
November 2018

Alberta

USD2,250,000,000
3.35% Global Benchmark
due November 1, 2023

(AA/Aa1/A+)

Joint Bookrunner
October 2018

CMHC SCHL

CAD5,500,000,000
2.55% due December 15, 2023

(AAA/Aaa/AAA)

Lead
September 2018

Saskatchewan
Real Growth. Real Opportunity.

CAD300,000,000
3.10% due June 2, 2050

(AA/Aaa/AA)

Lead
August 2018

Québec

CAD500,000,000
2.60% Green Bond
due July 6, 2025

(A(H)/Aa2/AA-)

Joint Bookrunner
June 2018

EDC

CAD500,000,000
1.80% Green Bond
due September 1, 2022

(AAA/Aaa/AAA)

Joint Bookrunner
August 2017

Manitoba

USD1,000,000,000
2.125% Global Benchmark
due May 4, 2022

(A(H)/Aa2/A+)

Joint Bookrunner
April 2017

Canada

USD3,500,000,000
1.125% USD Benchmark
due March 19, 2018

(AAA/Aaa/AAA)

Joint Bookrunner
March 2015

TORONTO

Alex Caridia
Managing Director
Head, Government Finance
416.842.7756
alex.caridia@rbccm.com

Kevin Martin
Director
416.842.7752
kevin.e.martin@rbccm.com

Sam Dorri
Director
416.842.7750
sam.dorri@rbccm.com

Mansoor Khan
Vice President
416.842.7765
mansoor.s.khan@rbccm.com

Shaaj Vijay
Vice President
416.842.6250
shaaj.vijay@rbccm.com

Chris Meston
Analyst
416.842.2548
christopher.meston@rbccm.com

MONTREAL

Jean-Francois Dube
Director
514.874.6928
jean-francois.dube@rbccm.com

Alexandre Cleroux-Perrault
Associate
514.878.7395
alexandre.cleroux-perrault@rbccm.com

NEW YORK

Jigme Shingsar
Managing Director
212.858.8343
jigme.shingsar@rbccm.com

Michelle Markovich
Analyst
212.428.6603
michelle.markovich@rbccm.com

GLOBAL SSA SYNDICATE

Rich Van Nest
Managing Director
Head, Canadian Syndicate
416.842.6311
richard.vannest@rbccm.com

Kerr Finlayson
Director
UK Syndicate
44.20.7029.0318
kerr.finlayson@rbccm.com

Darren Crook
Vice President
US Syndicate
212.618.7730
darren.crook@rbccm.com

Daniel Wilson
Associate
APAC Syndicate
612.9033.3033
daniel.wilson@rbccm.com

DERIVATIVES

Nicole d'Ombrain
Director
416.842.6754
nicole.d'ombrain@rbccm.com

Ankur Khurana
Vice President
416.842.6752
ankur.khurana@rbccm.com

The information contained in this brochure has been compiled from sources believed to be reliable, but no representation or warranty, express or implied, is made by Royal Bank of Canada, RBC Capital Markets, its affiliates or any other person as to its accuracy, completeness or correctness. Nothing in this brochure constitutes legal, accounting or tax advice or individually tailored investment advice. This brochure is prepared for general circulation to clients and has been prepared without regard to the individual financial circumstances and objectives of persons who receive it. The investments or services contained in this brochure may not be suitable for you and it is recommended that you consult an independent investment advisor if you are in doubt about the suitability of such investments or services. This brochure is not an offer to sell or a solicitation of an offer to buy any securities or to take any deposits or provide any financing. Past performance is not a guide to future performance, future returns are not guaranteed, and a loss of original capital may occur. Every province in Canada, every state in the US, 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. As a result, the products and services discussed in this brochure may not be eligible for sale or otherwise in some jurisdictions. This brochure is not, and under no circumstances should be construed as, a solicitation to act as securities broker or dealer or otherwise in that jurisdiction by any person or company that is not legally permitted to carry on the business of a securities broker or dealer or otherwise in that jurisdiction. To the full extent permitted by law neither RBC Capital Markets nor any of its affiliates, nor any other person, accepts any liability whatsoever for any direct or consequential loss arising from any use of this brochure or the information contained herein. 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, LLC (member FINRA, NYSE, and SIPC); RBC Dominion Securities, Inc. (member IIROC and CIPF); RBC Europe Limited (authorised by the Prudential Regulation Authority and regulated by the Financial Conduct Authority and the Prudential Regulation Authority); Royal Bank of Canada – Sydney Branch (ABN 86 076 940 880) and Royal Bank of Canada, Hong Kong (regulated by HKMA and SFC). ® Registered trademark of Royal Bank of Canada. Used under license. © Copyright 2019. All rights reserved.

01/19 18-239A

rbccm.com