RBC Capital Markets

Canadian Public Sector Borrower Roundtable

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TOP TAKEAWAYS

This year's roundtable proved, once again, to be highly informative. Leaders in Canada's public sector debt markets had a frank and open dialogue about the economy and Canada's position in the global market. Participants shared their perspectives on what happened in 2019 as well as their thoughts on 2020's forecast. Here are some of the main themes from this enlightening discussion.

1

Canada's Economy Proves Resilient Amid Slower Growth

It's clear: 2019 witnessed slower global growth, though Canada managed to outperform. Canada's borrowers experienced a slower-growing-economy than predicted. While a number of factors restrained growth, there were bright spots and silver linings – like significant job creation, increasing immigration and a better housing market – that showed the country's economic resilience. These trends position Canada effectively for the future and will be needed to push the economy through expected global headwinds in 2020. A modest economic expansion is forecast for 2020.

2

Housing Market Better but Affordability Still a Challenge

The housing market bounced back to healthier activity in 2019. It was noted that delinquencies and average LTV's have all been improving since stress tests were put in place, with average equity levels improving and arrears rates near record lows; the data is what is driving the positive narrative. This momentum should continue in 2020, supported by lower mortgages rates, solid labour markets and strong population growth. Housing affordability remains a problem, especially in Toronto and Vancouver and for the most vulnerable Canadians. The goal for Canada's National Housing Strategy (NHS) – a 10-year, $55 billion plan – is for every Canadian to have a home they can afford by 2030.

3

Trade Disputes and Civil Unrest = Risky Business

2019 continued to see escalating trade tensions, geopolitical uncertainty and deteriorating global growth. The agreement between the US, Mexico and Canada (USMCA) was recently ratified, though there continues to be a fair bit of uncertainty on the trade front. Even bigger risks come from ongoing trade battles between the US and China. Compounding investor anxiety is political unrest in Hong Kong and potential civil instability in the US through the 2020 elections. Despite mounting global risks, the outlook is not all bleak: Canadian exporters can diversify their supply chains and capitalize on new trade opportunities.

4

The "Canada" Brand is Strong Internationally

With one of the higher yielding currencies and solid investment fundamentals, the Canada brand is popular around the world. Investors continue to see Canada as a safe haven, with international allocations increasing as a result. More Canadian issuers are issuing in Dollar and Euro markets in what has traditionally been the domain of European SSA's, with investors comfortable with the increased exposure. Domestic investors nonetheless have some concerns about the shine coming off Canada.

5

Maple Bonds are Building Steam

It's been a strong year for maple bonds, with over $7 billion in issuance, compared to $5.5 billion in the previous year. These bonds are proving popular because of their strong ESG components. This upswing also reflects robust interest in the Canadian dollar market.

6

ESG Investing Continues to Swell

Increasing media attention and public concern over climate change continues to spill over into the investment space. The green bond market grew to $215 billion globally, up from $170 billion the previous year. Even though Canada holds a small portion (2%) of this market, we've made significant inroads this year. Ontario leads the way as the largest Canadian issuer with six green bonds. Beyond the green bond market, the issuance of broader sustainability-themed bonds aimed at addressing social and governance issues may become topical.

7

Watch for Lower Interest Rates Ahead

For over a year, the Bank of Canada has held interest rates at 1.75%. With so many of their global counterparts cutting interest rates, will its holding pattern continue? Some expect the Bank of Canada will ease its monetary policy and follow suit in the coming months.

8

The Impact of QE

There was general consensus on the impact global QE will have on CAD rates, though the magnitude of that impact was in dispute. Some even fear a lack of investable high-grade bonds in 2020, pointing out the impact that continued central bank asset purchase programs have had on global yields (A peak of $17 trillion of negative yielding high-grade debt). Some also pointed out that we have yet to see any meaningful rotation from equities to fixed income, which would anchor rates further should that occur. One can envision a scenario in which we have even more liquidity in fixed income markets looking for a home.

9

Changing Credit Strategies

The question is: where does that money find a home, which ties in well with some of what was discussed on credit strategies. Participants noted that the Canadian index has increased in duration from ~5.5yrs to ~8yrs over the past decade, with the quality of that index decreasing (at least by credit rating). With the curve flattening in both underlying rate and credit, clipping coupons out the curve isn't a place some felt comfortable. Rather, increased exposure to higher grade US IG, as well as moving down the curve and boosting returns with increased torque was noted as a more likely strategy going forward. There was also broad consensus on the need to stay very liquid, which would tend to see peripheral credits trade at a larger discount.

10

Beyond LIBOR: Preparing for Benchmark Reform

Interest rate benchmark reform is a topic that also received considerable attention, particularly given the continued relative lack of liquidity in the swap market. With all FHLB banks mandated to move their liabilities to SOFR by the end of March 2020, that will be a positive liquidity event for the market. There was however concern that a lag between the elimination of LIBOR and a liquid SOFR-CDOR swap may create a market disruption as far as offshore funding is concerned for Provincial borrowers.

Canada proves resilient in a weakened global economy

Carrying on the tradition, RBC Capital Markets (RBC) brought together Canada's Federal and Provincial borrowers for a roundtable discussion in November 2019. They shared their thoughts on national and Provincial economies, interest rate trends, the housing market, green bonds and Canada's international reputation, to name a few of the topics discussed.

Everyone around the table agreed that we haven't had a robust year but, overall, Canada has been resilient. Despite lower than expected growth in 2019, Canada's GDP is one of the highest in the G7. We've had near record employment growth. Our oil markets performed better than expected. Several Provinces saw stellar growth. Mortgage arrears rates remain quite low. Though the "Canada" brand remains strong internationally, domestic investors are more concerned about the shine coming off. Looking ahead, there are worries about increasing economic and political tensions, both within and between countries.

CANADA'S ECONOMIC LANDSCAPE

Mark Chandler, RBC: Before we begin this year's roundtable, I want to share some thoughts on our economy. When asked if I feel optimistic or worried about it, the first thing that comes to mind is: compared to what? This year was tough. At the end of 2019, we'll probably see annual growth around 1.6%. This is about half of the growth that we experienced in 2017. But we're 10 to 11 years into a cycle. If you think about the longevity of the cycle, our exceptional second quarter and our astounding employment growth this year, you may be satisfied, if not optimistic.

Several Provinces did very well this year. Quebec was near the top of the list. Some of the western Provinces rebounded: Alberta and British Columbia saw growth that was above expectations.

Next year looks similar – growth slightly below potential, with some room for unemployment rates to move up. Exports and investment may struggle. Overall growth will be close to 1.6%. Like this year, we expect to see support from the government sector next year. We think government spending, Federal and Provincial, added to this year's growth.

Chandler, RBC: Do you agree with this assessment? Do you have a different view?

Nicolas Moreau, Department of Finance: I agree. Canada's economy is anticipated to continue to grow close to its potential at a pace just below 2 percent. Supported by the strongest labour market conditions in decades, consumer spending is projected to increase at a steady pace, and housing activity is expected to continue its ongoing recovery. Overall, investment and exports are anticipated to grow moderately.

In the energy sector, investment is forecast to stabilize, and oil exports should improve as pipeline and rail capacity gradually expands. In term of risks to the outlook, the Canadian economy continues to face challenges associated with an uncertain global environment reflecting ongoing trade tensions between the world's largest economies.

Domestically, downside risks are associated with the high level of household indebtedness which, remains a key vulnerability for the Canadian economy. A negative shock to Canadian incomes or house prices could put a strain on household finances and hold back consumption and residential investment for a prolonged period of time. On the upside, continued resilience of the Canadian labour market and faster population growth could lead to stronger household spending and economic activity than expected.

Mike Manning, Ontario Financing Authority: From Ontario's perspective, the employment growth helped us. By the end of October the Ontario economy created 207,000 jobs so far in 2019. That's almost half the jobs created in Canada. We're looking at employment growth of 2.6%, up from the 1.3% we projected in our April Budget. Unemployment is at an historical low of 5.3%. Last year's average was 5.6%. Things are definitely trending in the right direction.

We had our fall economic statement a couple of weeks ago. The revenue numbers were quite a bit stronger than expected, with about $1.6 billion more revenue. That reflects a stronger economy than was forecast. Our debt interest costs fell by $400 million, and the government was able to reduce the plan deficit from $10.3 billion to $9 billion.

But more importantly, our borrowing requirements dropped $4.1 billion for the current fiscal year. I think that's been somewhat supportive and our spreads are well behaved.

We've been active in the domestic market. We've done 20 domestic deals so far this fiscal year. The amazing thing is we've done five long deals in a row and the market was able to absorb them quite easily. Things for us are working out relatively well.

Chandler, RBC: We saw two budgets – Alberta and Ontario – with sharp reductions in the anticipated deficits this year. Alberta is looking for a balanced budget by 2023 and Ontario by 2024. There wasn't a lot of market reaction regarding these budgets. Were you surprised, disappointed or does more go into it?

Stephen Thompson, Province of Alberta: We are particularly disappointed with the relative value to Ontario. Canadian investors are much more aware of the regional disparities and they're much more in tune with those relative values. Internationally, investors are more focused on fundamentals and liquidity. That demand has provided arbitrage opportunities in local markets, which has tended to lead us offshore. We will follow the cheapest cost of funds for the Province. Alberta has a new government with one budget behind it. There have not been a lot of metrics to measure since the budget was released. We'll give the fiscal plan some time to see if it works its way to the credit markets. But if not, we'll follow the funds wherever they are.

Chandler, RBC: Guillaume, Quebec had stellar performance over the last couple of years. Are there any particular sectors that you can point to that have been part of this resilience?


Mark Chandler

Guillaume Pichard, Province of Quebec: Consumer spending is strong in Quebec. It has driven GDP growth for the past two years. With consumer spending growth, we also have strong business investment growth. Tariffs, however, continue to be one of the biggest uncertainties. The new trade agreement was signed in late in 2018 with the US and Mexico, but we still have tariffs on aluminum and steel until June 2019. We have to hope for more stability on the trade front.

Chandler, RBC: Is there anything on the public spending side that's responsible for some of the resilience?

Thompson, Province of Alberta: We've been a little surprised by the performance on the non-energy side. Energy has been somewhat weaker than we thought. We forecast being out of pre-recession levels by the end of 2019 but it's looking more like 2020. We're at a slightly different point in the cycle.

Don Delisle, Province of Manitoba: We usually run pretty close to the Canadian average for growth. This year, and potentially next year, we're thinking it's going to be a bit under but our private investment is good within the Province. It's been at record highs the last number of years. Some infrastructure projects are getting scaled back a little bit due to the government's focus on fiscal prudence.

By the end of October the Ontario economy created 207,000 jobs.
That's almost half the jobs created in Canada.

– Mike Manning, Ontario Financing Authority

INTEREST RATES

Chandler, RBC: I'm not sure we have the highest overnight rate of all the major industrialized countries but will we be able to buck the trend to lower interest rates?

Moreau, Department of Finance: The management of monetary policy remains the sole responsibility of the Bank of Canada. This includes the setting of the Bank's key policy interest rate. I have full confidence in the Bank's Governing Council to make appropriate interest rate decisions that are consistent with the inflation target. That said, when we look at the current level of interest rates in Canada, they are reflecting Canada' resilience and relative position of strength. Supported by solid fundamentals, including ongoing strength in the labour market and healthy consumer confidence, the Canadian economy continues to grow at a solid pace and is expected to be the second-fastest growing economy in the G7 next year.

> When we compare our GDP combined with our growing population, we have a growing potential GDP. Other countries are weaker.
>
> *– Nicolas Moreau, Department of Finance*

Chandler, RBC: Low interest rates caught a lot of people off guard. From the investor side, a common strategy is to keep those returns in place, go further up the curve, and go further down the credit spectrum. Ryan, is that the basic modus operandi for Leith Wheeler?

Ryan Goulding, Leith Wheeler: With those kinds of small incremental moves, you can end up over time with a portfolio that looks very different from your core competencies. We've gone the other way. We've added higher torque to our shorter term strategies. We've moved our geographic exposure as well. We're trying to move into the US to see what we can do with more tactical trading within our core competencies. We would retract and avoid buying liquidity premium as well. Liquidity is always mispriced.

Dominic Siciliano, Addenda Capital: We've been pushed by the index. When I started the duration of the index was closer to 5. Now we have an index with a duration of 8. It's been forcing investors into longer duration and consequently, an increase in overall risk. Furthermore, the quality of the index has decreased significantly. Whether that's a ratings game methodology change or a reality, it still has an impact.

Since the curve is inverted or has no carry, right now is not a great time to be clipping your coupons as a portfolio manager. You have to be cognizant that it's never been cheaper to be short and remain defensive. You can sell something down the curve that's less than a money market rate. It's finding the balance. We still feel that an inverted curve is not something that should be standard for fixed term investors. Optimizing your curve positioning is crucial.

THE USMCA AND EXPORTS

Chandler, RBC: Susan, when you talk with exporters does the USMCA still come up? Is there a worry there?

Susan Love, Export Development Canada (EDC): We've yet to ratify the agreement, so naturally there are still concerns related to that uncertainty. It's been a challenging number of years for exporters. The US is our biggest trading partner. EDC continues to talk to exporters and Canadian companies about the benefits of diversification and the importance of being part of global supply chains. Compared to many other markets, the Canadian market is quite small. There are significant opportunities if companies are willing to do business beyond our borders.

Canadian companies are recognizing the importance of doing business outside their domestic market and not being tied to only one market outside of Canada (more than 75% of our exports go to the US). The trade issues we've had with the US highlighted the importance of diversification. EDC is continuing its work to put products and services in place to help Canadian companies expand internationally.

Chandler, RBC: Compared to the strong US dollar, it doesn't look like the Canadian dollar has moved much. But, these two North American currencies appreciated against most others. Is this Canadian dollar strength an issue for Canadian exporters?


Susan Love

Love, EDC: Initially it was, but after the adjustment to the oil price shock of 2014-16, the Canadian dollar has been relatively stable, in the high 70 cent range, which is generally supportive of Canadian exports. Although you might see a bit more strength in the Canadian dollar over the long term it will be limited so there shouldn't be much of an impact on exporters. Exporters would be a lot more comfortable if they had greater certainty on the trade agreement front.

THE OIL MARKET

Chandler, RBC: At the start of the year, we were looking at oil markets that looked a lot less healthy than they do right now. Stephen, how much of an impact has the improvement in oil prices meant for you?

Thompson, Province of Alberta: It has a significant budget impact on us. If you look at 2018, over 50% of our growth in real GDP came from the energy sector. As much as we've seen large revenue impacts to the Province, it's been on a declining basis ever since. This year we're looking at about 13% of revenues tied to energy. The actual impact of oil, dollar-for-dollar, has decreased over time. It's an important metric, but it's no longer everything.

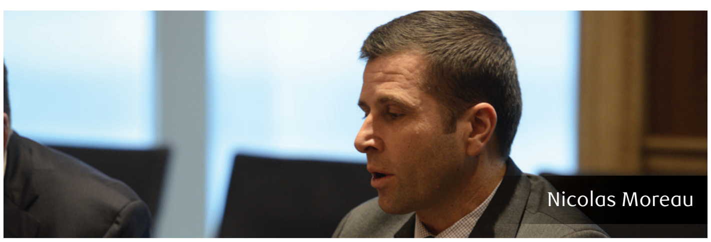
Chandler, RBC: Ryan, as an investor, is it too simplistic to think of oil and spreads? Are there other things that go into the calculations? Is it simply that you like Alberta if you're feeling bullish about oil?

Goulding, Leith Wheeler: I would put that low on our thesis. We've been a fan of Alberta for a while. Our core thesis has nothing to do with the short-term price movements of oil. The underlying fundamental credit is a great story, and we have no problem investing from that standpoint. The oil-to-price relationship is like many technical indicators. Other people follow it, so you have to pay attention. In terms of entry points, we pay attention to shorter term positioning opportunities but we certainly don't trade that around.

CANADIAN REGULATORY MEASURES

Chandler, RBC: From your talks with overseas investors, do you think we did the right thing in terms of our macro-prudential measures and policies? What are you hearing?

Moreau, Finance Canada: We still get the question. The Government has tightened macroprudential measures repeatedly since 2008 to protect the financial security of borrowers and increase discipline in mortgage markets. Macroprudential measures, including the stress tests for both insured and uninsured mortgages introduced by the Government and the Office of the Superintendent of Financial Institutions continue to help ensure that Canadians take on mortgages they can afford, even if interest rates rise or incomes change.


Nicolas Moreau

The stress tests are having the intended impact of reducing the number of highly indebted mortgage borrowers, thereby reducing risks to economic and financial stability. Nevertheless, vulnerabilities from household indebtedness remain elevated and are expected to diminish only gradually.

Chandler, RBC: Dave, you must hear this when you talk to investors about the housing market. Affordable housing has also been a big focus for the CMHC. Can you give us an update?

David Ayre, CMHC: We get questions about the housing market all of the time from our investors.

CMHC takes a leading role in Canada in housing market research including publishing significant amounts of data on mortgage delinquencies and arrears rates. This data around delinquencies and arrears rates tends to give our investors comfort around the overall health of the housing market in that our arrears rates are at near record low levels (approximately 0.29%). In addition to this, equity levels have also been gradually increasing in our portfolio. The Government introduction of mortgage stress testing rules has been viewed as quite positive for mortgage quality in Canada and the effect has been evident in our data.

Our CEO, Evan Siddall, has vigorously defended the stress testing when there are calls to loosen regulations and - as noted - the mortgage quality data shows that the tighter rules have had the intended effect. For international investors who are not that familiar with Canada, I find the data does a great job of calming concerns around debt levels and the housing market in general.

With regard to housing affordability, this is a huge story for CMHC and has become a major focus over the last few years. Affordable housing is something our CEO has pushed pretty hard. Canada has had a significant lack of supply of affordable housing over the years and the introduction of the National Housing Strategy (NHS) in 2017 has looked to address this through nearly fifty-five billion dollars of investment to be made over a 10-year period to help increase housing supply across the spectrum, especially for the most vulnerable people in Canada whose housing needs are not being met by the market.

In some regions, Toronto and Vancouver in particular, finding affordable housing is particularly difficult. CMHC has set an aspirational goal that by 2030, everyone in Canada has a home that they can afford and that meets their needs, this is certainly a big challenge but we are absolutely up to the challenge of helping to make this happen.

Our CEO, Evan Siddall, has vigorously defended the stress testing when there are calls to loosen regulations...
– David Ayre, CMHC

BIGGEST RISKS AND WORRIES

Chandler, RBC: Last year we said our biggest worry was China and the emerging markets. What's your biggest worry for 2020? Is there anything that particularly keeps you up at night?

Abid Dobani, RBC: My concern is the availability of liquid fixed income assets, and the risk premia paid on these assets. Globally, there are 30 individual quantitative easing programs. Six of the major 23 have done it. When I take a look at some of the BIS surveys, 70% to 73% of the purchases since 2008 were sovereign or semi-sovereign. Most studies show QE programmes from 2009 to 2014 have lowered 10y treasury yields by about 100bps. Add to this 90 interest rate cuts by 45 central banks. Quantitative easing and interest rate cuts are being used as blunt force tools to continue the economic expansion by keeping rates low. In the current market, risk premia are not a factor for asset purchases, and that worries me as it shows the tremendous amount of cash sitting on the sidelines looking to buy any dip for fear of further QE or lower for longer interest rates. It's important to remember, our current yield environment exists while equities are near their all-time highs; one shudders to think what an equity market correction related asset reallocation would do to fixed income yields.

> When I look out a year forward, that's not my largest concern. My concern is the availability of fixed income assets.
>
> *– Abid Dobani, RBC*

Goulding, Leith Wheeler: My concern is the potential for broadening and intensifying civil unrest. We are seeing the beginning of civil unrest in the developed world. Next year's US elections could create a greater divide there. What we're seeing in Hong Kong is a microcosm of rising gini coefficients globally and the destabilizing nature of that inequality.

I'm concerned that monetary policy is very homogenous when you apply it. Fiscal policy can come in many forms, and no one's going be happy with its roll out. When that is deployed globally, there's going to be those that benefit and those that don't.

Chandler, RBC: Equity markets are booming, yet rates are down. We haven't even seen the asset allocation or traction out of equities and into fixed income that might cause a further push down in government yields. If we do see a significant risk-off event, will we see more of a flight-to-liquidity rather than a flight-to-quality? What's your concern about liquidity now?

Goulding, Leith Wheeler: The ability to sell. In terms of where we're hiding out right now – keeping corporate credit exposure and in the short end – you have to put your assets in something. Ask yourself, assets are liquid, but are they going to be liquid when you need it? And liquidity is never priced right.

Siciliano, Addenda Capital: The ETF market is interesting because, on the fixed income side, you have an OTC market that trades seven days a week, 24 hours a day. Then you have an exchange that closes at 4 p.m. How can the two environments coexist? During the previous crisis we had listed exchanges closed for several days with OTC markets free to trade.

The way the banks and wealth management firms work now, there is no advice for the retail person. There's nobody there to tell them if it's the right time to buy or sell. The lists hit the dealers and then we're hit with people wanting to sell. That worries me because how are we going to shut down the OTC market to regulate the flows in the US, which are a lot more important in Canada.

ISSUANCE – A RECORD YEAR

Chandler, RBC: If we look at issuance, it looks like a record year. We've had $96 billion so far this year. But if you look at the DEX index for the Provinces, it's up over 10% through October of this year versus 7.6% for the universe. Investors don't seem frightened of excess issuance. In terms of the Provinces, what is the basic Issuance framework you look at?

Goulding, Leith Wheeler: We don't hold fixed targets throughout the year. It's a function of the funding cycle. International participants in the market have changed our ranges. That is one spot that we're at an informational disadvantage. When someone's selling a couple of hundred million 10s every night, we have no way to know the appetite to absorb that flow or to know how much is behind it. As such, we've widened our ranges. You can get run over by these international flows as they're indiscriminate.

Pichard, Province of Quebec: From our perspective, even at the lowest point in rates, we were able to print a long bond at 2.17%. It sold out immediately – that's something I'll remember for quite a while. I was amazed that we could sell long bonds at these low rates.

> Even at the lowest point in rates, we were able to print a long bond at 2.17%. It sold out immediately – that's something I'll remember for quite a while.
>
> *– Guillaume Pichard, Province of Quebec*

Dobani, RBC: A lot of this group are issuing in the foreign space and it makes sense as the world hit a peak of $17 trillion of negative yielding debt. Foreign currency denominated issuance (in general) is brought back to Canadian dollars via a cross-currency basis. Benchmark reform will bring this basis into focus as LIBOR is being transitioned to SOFR. The jury is still out on how benchmark reform will impact the cross-currency basis, and so we have the question of how will Provinces continue to fund internationally after LIBOR is discontinued?

Pichard, Province of Quebec: Benchmark reform is going to be a huge field where we should all be concerned. When you do a benchmark in Dollars, Euros or any foreign currency, we bring it back to Canadian dollars. Our ability to do that right now is pretty fair. It's accessible and that's something we don't want to lose. We need to pay attention to this over the next few years because Libor is going away and the way we bring a foreign issue in Canadian dollars is going to change.

Manning, Ontario Financing Authority: The proposed upcoming changes in accounting rules are not very helpful either. There is the potential to change the rules on things like hedge and foreign currency deals with forward contracts. These can be quite cost-effective for the Provinces and are going to become more challenging.


Mike Manning

IMMIGRATION

Chandler, RBC: One of the themes I would like to discuss is the influence of immigration on Canada. We had a 350,000 immigration target. That's roughly 1% of our population growth coming from immigration – a historical high in Canada. There are challenges that go along with that. Don, what have you seen in Manitoba?

Delisle, Province of Manitoba: We've been fortunate in terms of immigration because of our Provincial Nominee Program, which has been in place for decades. 90% of economic immigrants into the Province come in from this program. The government works with business to identify shortages in specific areas of the economy and then actively recruits for those positions. Immigrants who come to Manitoba come into a job. The retention rate for this program has been significant, even with our winters. We've also seen housing starts at record highs too, which is a good ripple effect.

Chandler, RBC: What does immigration do in terms of infrastructure stresses for the Provinces?

Delisle, Province of Manitoba: We are not currently seeing such immigration-related stresses on infrastructure in the Province. Manitoba doesn't have the constraints on land that other regions have. While we do need infrastructure to support housing development, much of that responsibility falls under the jurisdiction of the municipalities.

Pichard, Province of Quebec: One issue we have in Quebec is our aging population. With our tight labour market, it's not as difficult to roll out infrastructure projects as it is to get workers to build them. In Montreal and other areas, we've built major hospitals. There's also the REM, a big transit project underway in Montreal. We're spearheading a tram project in Quebec City. The challenge is not getting financing, but getting the projects done on the ground. The government has put in place measures to bring back and keep experienced workers in the workforce which help a lot.

Manning, Ontario Financing Authority: Ontario has some sizable infrastructure plans as well. We're looking at spending $144 billion over the next 10 years: $67 billion for transit; $22 billion for highways; $27 billion for hospitals and $19 billion for schools.

But going back to population growth, Ontario had an amazing surge in population growth in the last couple of years. In 2018-2019, we had 248,000 more people come into the Province. That's about 1.7% growth, compared to our typical growth of 0.9%. The risk I see is not having the services and infrastructure to support this growth.

Thompson, Province of Alberta: In Alberta, we're winding down our counter-cyclical capital spending program. The government is committed to ramping down capital spending to more normal levels. In terms of schools, hospitals and roads, we've actually had significant builds over the last five years to catch up from former infrastructure deficits.

GROWING INTERNATIONAL DEMAND FOR CANADA

Chandler, RBC: Alex, what did you hear from investors at RBCs annual "Canada roadshow" in Asia this year?

Alex Caridia, RBC: There is growing international demand for Canada. Investors are looking at it from two perspectives: Canada is a relative safe haven on the political front and, apart from the US, we have the highest yielding currency of the G7.

If you look at spreads, we can compare some of the Provincial spreads to their international peers, including the German sub-sovereigns. Ontario did a deal this week at 76 basis points. German sub-sovereign spreads are somewhere in the mid-40s. Because of these metrics, Canadian dollars look very attractive to international investors.

Generally, we're seeing more investors adding – and increasing – their allocations to Canada. One of the large pension funds in Asia is increasing their allocation from 4% to 8% for Canadian dollars, for example.

Another trend we're seeing: investors are looking at Canadian credits in other currencies. They are adding Canadian names in currencies that would traditionally buy SSAs. This year we've seen around a third of all Provincial issuance in non-CAD currency. That's about $36 billion. That's the same number we saw in 2017, which was a high.

> Canada is a relative safe haven on the political front and, apart from the US, we have the highest yielding currency of the G7.
>
> *– Alex Caridia, RBC*

Caridia, RBC: Renaud, you've talked about setting up a US dollar program. How do you see that fitting in with your domestic program?

Renaud de Jaham, PSP Investments: We're expecting to launch a global debt program mid- 2020. It's really important for us to diversify our investor base. Investors are looking for strong credits and diversification. The type of credit we offer fits perfectly. Even though we're a fairly young organization, the debt programs are growing quite fast because the assets under management are growing quite rapidly. A global debt program and issuing in other currencies other than Canadian dollars will definitely broaden our investor base.

It's key for our long-term program. Many asset managers like to see that as a natural hedge with the asset mix. If you look at the exposure to foreign currencies, 40% of our assets are exposed to the US dollar. That could be a great fit in terms of asset liability to reduce our US dollar exposure.

Caridia, RBC: Jigme, do you see any themes or trends in the coming years?

Shingsar, RBC: There's excess appetite for Canadian credits in the SSA market. We've seen the overall supply of dollars reduce a little this year and that's had an impact on spreads. Spreads versus treasuries are extremely tight.

Going back to the point about the yield and spread pick-up that Canada offers. The World Bank is trading in 10-year US dollars around the high teens to 20 versus US Treasuries. In Canada it would be closer to the mid-50s. That's starting to have an impact. There's excess capacity for Canadian credits in the US market. Our only constraint is the ability to make it look cost effective versus the Canadian market.

Caridia, RBC: Mike, I think you've issued right across the dollar curve. You've done 3s, 5s, 7s and 10s this year. How have you found the year in terms of accessing the dollar market? Have you seen any trends in terms of investor base on those various deals?

Manning, Ontario Financing Authority: We've had good experiences with our US dollar deals. We tend to have a pretty diversified investor base

and we typically spread them out. We could do, as many as three or four issues per year. Our requirements have gone down about $4.1 billion. That takes the pressure off in terms of having to access internationally. Right now, we're about $3.2 billion ahead of pace. We'll continue to look at that market. We prefer to do longer term issuance than short term but we're proactive in managing our debt maturity profile.

Caridia, RBC: Stephen, if your domestic spreads don't move in can we expect another dollar deal from you?

Thompson, Province of Alberta: You sure can. Our program target is 60% domestic. Last year we printed in other currencies and 55% of what we did was foreign-denominated. We'd prefer some duration, so I could see us move into Euros rather than dollars because that market has a better appetite for duration.

Caridia, RBC: Guillaume, what is your view in terms of offshore markets?

Pichard, Province of Quebec: We're going back to more sizable numbers next year – $21 billion with an average of $26 billion for the next three years.

If we could do some pre-funding with a dollar deal this year, and the level is right, we'll be back. We did a five-year but haven't done a 10-year US dollar deal in a while.

The US is definitely part of our core strategy, so is the Euro market. An interesting word about the Euro market: we printed a 10-year bond that was negative yielding by three basis points. We would definitely do that trade again.

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>
> *– Guillaume Pichard, Province of Quebec*

Caridia, RBC: Susan, you're mainly active outside of Canada. What are your continuing plans in the Euro market?

Love, EDC: We did our first benchmark bond this year in the Euro market. We wanted to wait until we could be a regular issuer there.

There is definitely a preference from investors for longer duration in Euros. If you're looking for diversification of term and you are going short in the dollar market, you can use the Euro market in the longer end. It is not surprising that investors are looking for every basis point given the level of yields

Globally, the Canada brand is well received. Our reception in the Euro market was extremely positive. It was an excellent experience for us and we plan to issue again this coming year.

Caridia, RBC: This year there has seen some issuance in more esoteric currencies, like New Zealand dollars and the Swedish Krona. Are there other currencies on your radar?

David Ayre

Delisle, Province of Manitoba: We're pretty flexible. As long as we can bring it back at rates that are competitive on the domestic side, we'll go look at it. We've put an EMTN program in place that can take advantage of those currencies when they present themselves. We're open to evaluating anything that comes in.

Pichard, Province of Quebec: We have the same approach. If the cost makes sense back in Canadian dollars, we'll work in off-the-run currencies like the Aussie, Krone or other foreign currencies. Pounds have been good for Provinces for the last three to four years.

Love, EDC: This is not on the currency side, but we issued in SONIA this year for the first time. The reception was very good and it's something that we plan to continue. We are setting our systems up to potentially issue in SOFR next year. That market is a little bit behind in terms of its development, but by 2020 that will be a spot where we could issue.

Pichard, Province of Quebec: We were looking at SOFR as well, but we got the sense that some investors were not ready yet. Maybe that's something we will look at in 2020. We are all set up to internally, but want to make sure the buy side is ready.

Dobani, RBC: I think it's important to note the Federal Home Financing Agency in the US has mandated that, as of March 31, 2020, none of their 11 home banks' assets, liabilities nor derivatives that mature after December 31, 2021 can be based off LIBOR. This will be your first real SOFR liquidity event. In October 2020, LCH and CME (derivative clearinghouses) will transition to SOFR discounting (from Fed Funds). This will be your second liquidity event. Hopefully these two liquidity events will give comfort to issuers, and bring more activity in the SOFR space.

Caridia, RBC: Looking at foreign currencies, will you add Canadian names in foreign currencies to increase your portfolios?

Goulding, Leith Wheeler: We certainly are. Within most of our mandates, we do have that ability. We usually want to bring it back FX-hedged. Like any other off-index lever, there's a higher bar to pull it off. This is one of those strategies that we are doing more and more. We've had investors modestly shift and increase their demand for global IG.

Siciliano, Addenda Capital: We purchase US and Euro products, and we're open to other currencies. We've done a couple of pound trades. We like it when issuers have the ability to go elsewhere. It's very supportive for the domestic issuance market. It's complicated for our segregated business given our investment policies framework. It's difficult to do some of the onboarding for derivatives within the context of our required legal documentation. But we definitely have the capacity for our pooled funds.

Dobani, RBC: Liquidity is top of mind for bank portfolios and we always have to ask how can we repo these non CAD-denominated Provincial assets at fair levels in the other currencies. Purchasing Provincial debt in any currency but CAD is a balancing act between repo cost (to generate cash if needed), secondary market liquidity (relative to the deep and liquid Canadian Provincial bond market), local liquidity value (LCR level if the asset is held in non-Canadian jurisdictions), and the currency of the source funds (i.e. the potential relative value pick-up of swapping the assets back to CAD, US, etc.).

Caridia, RBC: Renaud, have you seen a big pickup in international participation of your domestic deals?

de Jaham, PSP Investments: Absolutely. Up until three years ago we only had domestic investors in our bonds. We've started to do more and more marketing and investor road shows internationally. Now we see approximately 30% international investors participate in our debt offerings. We are extremely pleased with that.

Caridia, RBC: Dave, I know that international participation is a key metric you focus on. Have you seen any changes over the last few years?

Ayre, CMHC: Like PSP, typically 30-33% of our primary distribution goes outside of Canada. This year-to-date we've seen a bit of a shift lower and it appears to be a tracking a couple percent lower than usual. This is led by a decline in US participation which, has been partially offset by an uptick from Europe and Asia. We certainly are not concerned with the shift and expect that 2019 will likely set a new record for largest number of investors involved in primary participation, something we are very proud of and a reflection of our marketing efforts and the focus from our syndicate on broadening our investor base.

Goulding, Leith Wheeler: The Canada brand is strong and, by luck or skill, we sidestepped the financial crisis and Canada's just had this uplift. Do you stress test your portfolios or your borrowing programs in case the shine comes off of Canada?

Pichard, Province of Quebec: A stress test would be very hard to put in place. But where we do it is through investor relations. We make sure we're on the lists of the major investors around the world. That's a part of our job that's less understood. We have to go out there to explain our credit in Europe, Asia and the US. It's surprising to see how unknown the mechanics of Provinces are. I've answered the same questions for the last 10 years from many different investors. There is still a lot of education to be done in the investor community outside of Canada.

Chandler, RBC: If you look at the total debt outstanding both at the Federal level and at the Provincial level, you're still talking about 75% domestic and about 25% foreign. If you compare that to other markets like Australia, it's turned on its head. If the shine does come off Canada, I'd say we're protected compared to some other districts.

Shingsar, RBC: I would say there's still more capacity for Canadian credits than is being utilized. The other thing is the demand for Canadian dollar assets. It's still lower than it should be given the track record – particularly, if you compare it to the Aussie dollar market.

Chandler, RBC: I'd add that for the past 15 years I've done an investor roadshow in Asia. In the past, I've thought of it as the "central bank" trip. For the last couple of years however it's been more about Japanese lifers and foreign banks – their liquidity pools and purchases.

Thompson, Province of Alberta: This also has an impact on price tension relative to the domestic market, as well as access to markets outside of Canada should there be a specific event. That's how we've always sold our dollar program to governments. If the shine comes off Canada, I don't think they'll stop buying Canadian, but I do see a scenario where it becomes more expensive.

Caridia, RBC: Another advantage is Canada's liquidity. I talk about this with international investors because it is unique. Canada is a smaller market but it's highly liquid. You can buy and sell 100-200 million Provincial bonds on a basis point bid offer. We all know the numbers; Ontario's annual secondary turnover is around 600-700 billion. We also submit numbers to the two largest international borrowers, KFW and EIB for US dollars. They are much larger borrowers, and the annual secondary turnover for KFW in US dollars is closer to only 200 billion. It's quite incredible how liquid Canada is.

Siciliano, Addenda Capital: The way we issue makes it difficult for foreign investors to buy bonds in the primary market. Are we are going to change the issuance structure to cater to more international participation?

Thompson, Province of Alberta: If you look back 10 years, possibly longer, people took a run at the "Canadian Dollar Global" market but it simply didn't work. I don't see us changing our domestic process because it works well for us.

de Jaham, PSP Investments: I used to hear a lot of complaints but I'm not hearing many now. I don't think any issuance process around the world is perfect. Ours is unique but very efficient.

Caridia, RBC: The maple market has grown over the last year. It's at a 10-year high at the moment in terms issuance. Jigme, a lot of your clients are issuing here, can you give us an update?

Jigme Shingsar, RBC: It's been a good year for maple issuance. This year we've issued over $7 billion after being at around $5.5 billion the previous year. We've already talked about the reasons why people are interested in Canada, but in terms of the issuers, much like the domestic issuers, they're looking for diversification. You can also measure the progress of the growth of the maple market in that we reopened the 10-year market. It's also very promising in terms of the pricing we're able to achieve.

This speaks to the fact that there's a growing critical mass of interest in the Canadian dollar market. There's a significant offshore demand component for these deals. It also creates two-way flow for the cross-currency basis market. A good chunk of these maple issues had an environmental, social and governance (ESG) component. That's helped, especially at the initial stages, to create a bit of momentum for ESG bonds in Canada.

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>
> *– Jigme Shingsar, RBC*

GREEN BONDS AND ESG FRAMEWORKS

Caridia, RBC: That leads into our next topic – green bonds. This year, $215 billion in green bonds have been issued globally so far. That's up from $170 billion last year and $35 billion five years ago. Canada has a small proportion of the overall green bond market, at just over 2%, but some issuers here are active in this market. Mike, since you issued a green bond recently, would you kick of this discussion?

Manning, Ontario Financing Authority: We issued our sixth green bond and are the biggest Canadian dollar green bond issuer. Looking ahead, we're going to make a slight tweak to our program. Typically, we do one big green bond issue a year. What we're going to do now is issue a couple of green bonds per year. We're looking at smaller sized bonds and, at some point, we'll look at other currencies such as US or Euro.

Caridia, RBC: Susan, I know you're active in green bond issuances. Are you planning to do more?

Love, EDC: EDC has issued five green bonds to date. There are currently three outstanding with one maturing next year. We definitely have plans to issue another green bond, possibly even two next year. We're overdue to issue in US dollars, so that's what we're planning to do next.

In addition, we are going to expand our green bond framework. We're making changes which will allow us to consider other types of themed bonds. Something on the gender front, for example. One of EDC's goals, shared by our subsidiary FinDev Canada, is to support women in business. As such, we think it could be appropriate to issue a gender bond. The other area, given the large oil and gas sector in Canada, would be on the transition bond front. That would be a natural move for EDC. In the shift to a lower-carbon environment, we want to help Canadian companies transition themselves to operate and work in a more climate friendly fashion.

Thompson, Province of Alberta: I think you'll find, and what is becoming more prevalent in Alberta, a positive ESG SRI [socially responsible investing] story coming from the Canadian energy sector. At the moment those discussions are happening politically and somewhat dramatically, but they will move into industry. When that happens, you will find Alberta to be open minded with respect to SRI frameworks, outside of green.

Caridia, RBC: Stephen, do you have a strategy around what you think you need to do?

Thompson, Province of Alberta: At the moment it's about countering the message. Right now that message is very one sided – it's accepted as fact in some regions that Alberta is nothing but dirty oil. And we would just like the opportunity to correct that perception.

So it's about getting our message out. It's about talking about the technological advancements in the oil sands. It's about correcting some of the poorly informed ESG investment policies. We let some major global banks go from our syndicate because of their poorly-informed ESG policies. All we can do is have a conversation with these investors, with these banks, to ensure that the story is being told fairly.

Siciliano, Addenda Capital: We do not favor exclusions. It's not the right approach. We believe that you have to have Alberta at the table. Alberta needs to be involved in the transition not excluded.

We do not favor exclusions. It's not the right approach. We believe that you have to have Alberta at the table.

– Dominic Siciliano, Addenda Capital

Moreover, It's not only about green bonds we need to focus on the broader issue of ESG principles in investments. Our firm has had lots of success with our impact fund. Broadening your investment perspective. Universities, for example, are natural Impact Investments that are positive for society and economic growth.

Stephen Thompson

On the maple side, when green bonds were brought to market they were issued in an extremely expensive portion of the curve. We won't buy them just because they're green. They have to have economic value because It needs to be beneficial for our clients. We're here to support the market and to have a dialogue with the issuers. I think there's a lot of potential for growth in that area

Ayre, CMHC: From the CMHC perspective, as noted we've had a big shift in our mandate to focus on affordable housing. Given this focus it is to be expected that any ESG issuance which, CMHC might undertake, would likely include mortgages that are linked to affordable housing. This is something we are looking at and in order to proceed would require a framework that would need to start at the NHA MBS level; we are currently working with our partners to assess how this could be developed.

Delisle, Province of Manitoba: Our biggest issue with green bonds is trying to find projects. The majority of green eligible projects such as transit, water and sewage, etc. fall under the purview of our municipalities. If the green bond market had been a little more mature when we were starting some of our major hydro projects, we could have considered it then. We certainly don't have any issues with green bonds, we just can't find projects for them.

Caridia, RBC: Renaud, do you have any plans to come into the green bond market?

de Jaham, PSP Investments: For us, ESG is becoming increasingly important. We have a responsible investment team that is involved in every transaction. From an issuer perspective, we would love to have green bonds and some ESG-tagged programs.

The way we analyze the market, the vast majority of the green bonds issued are niche projects for the issuers. Most of their issuance is not green. Since we have a fairly small program, $2.5 to $3 billion, our focus is building credibility, building a curve, building the liquidity and so on. In the short run, we don't expect to come to market with any green bond programs. Over the long run, we definitely have interest in some sort of ESG issuance or program.

SELECT CANADIAN PUBLIC SECTOR BORROWING PROGRAMS

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
PREMIER/CEO	Hon. Doug Ford	Hon. Francois Legault	Hon. Jason Kenney	Hon. Brian Pallister	Hon. Scott Moe	Hon. John Horgan	Hon. Dwight Ball
FINANCE MINISTER/CFO	Hon. Rod Phillips	Hon. Eric Girard	Hon. Travis Toews	Hon. Scott Fielding	Hon. Donna Harpauer	Hon. Carole James	Hon. Tom Osborne
CAPITAL/HEADQUARTERS	Toronto	Quebec City	Edmonton	Winnipeg	Regina	Victoria	St. John's
POPULATION ('000S)(1)	14,323	8,390	4,307	1,352	1,162	4,992	525
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)	1.5	2.4	0.6	1.3	0.6	2.2	2.6
SHARE OF CANADA GDP (%)	38.6	19.5	15.5	3.3	3.7	13.2	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-	Aa2/A+	Aa2/A+	Aaa/AA	Aaa/AAA	A1/A
% CAD ISSUANCE (2019)	71%	76%	40%	48%	100%	48%	100%
RECENT INTERNATIONAL ISSUANCE	USD, EUR, GBP, CHF, AUD, etc.	USD, EUR, GBP, CHF, AUD, etc.	USD, EUR, GBP, AUD	USD, EUR, GBP, AUD	n/a	USD, EUR, AUD, INR, HKD, etc.	n/a
2019/20 BORROWING (C$BN)	31.9	11.8	12.2	5.1	2.3	7.7	1.2
REMAINING FUNDING (C$BN)	8.3	–	6.3	2.2	0.8	0.0	0.2
2019/21 BORROWING (C$BN)	31.7	17.4	15.0	5.1	2.3	8.3	1.2
DOMESTIC TARGET TERMS	10 / 30	10 / 30	5 / 10 / 30	5 / 10 / 30	10 / 30	10 / 30	5 / 10 / 30
PUBLIC DEBT O/S (C$BN)(3)	327.8	191.9	76.8	48.6	20.1	58.1	14.3
FLOATERS PROPORTION	2.3%	5.6%	0.6%	2.0%	2.4%	1.6%	7.7%
ACTIVE ULTRA-LONG ISSUERS(4)	n/a	n/a	n/a	~C$1.1BN	~C$1.1BN	n/a	n/a
MIN. CARVE-OUT SIZE(5)	$600M (5yr) / $500M (10yr) / $400M (30yr)	n/a	$200M	$150M	$100M	n/a	$100M

Note: This data is current as of Dec 1, 2019 (1) Based on available 2018 data (2) 2018 Forecast based on RBC Research (3) Source: Bloomberg (4) Issued within the last two years (5) Large order protocol, order placed to one investor

NOVA SCOTIA	NEW BRUNSWICK	PEI	CANADA	CMHC	PSP	CPP	EDC
Hon. Stephen McNeil	Hon. Blaine Higgs	Hon. Dennis King	Hon. Justin Trudeau	Evan Siddall	Neil Cunningham	Mark Machin	Mairead Lavery
Hon. Karen Casey	Hon. Ernie Steeves	Hon. Darlene Compton	Hon. Bill Morneau	Lisa Williams	Nathalie Bernier	Neil Beaumont	Ken Kember
Halifax	Fredricton	Charlottetown	Ottawa	Ottawa	Montreal	Toronto	Ottawa
960	771	153	37,059	n/a	n/a	n/a	n/a
Real Estate, Health, Public Admin	Real Estate, Manufacturing, Construction	Manufacturing, Real Estate	Energy, Agriculture, Tech, Manufacturing	n/a	n/a	n/a	n/a
0.9	0.8	2.2	n/a	n/a	n/a	n/a	n/a
2.0	1.7	0.3	100	n/a	n/a	n/a	n/a
Apr-Mar	Apr-Mar	Apr-Mar	Apr-Mar	Jan-Dec	Apr-Mar	Jan-Dec	Jan-Dec
Aa2/AA-	Aa2/A+	Aa2/A	Aaa/AAA	Aaa/AAA	Aaa/AAA	Aaa/AAA	Aaa/AAA
100%	81%	n/a	100%	100%	100%	13%	0%
n/a	USD, CHF	n/a	USD, EUR	n/a	n/a	USD, EUR	USD, CAD, EUR, GBP, AUD, etc.
1.5	1.5	0.1	~115.0	40.0	2.0	~10.0	~13.0
0.6	0.3	–	30.0	–	0.75	Nil	0.5
1.4	1.5	–	~100.0	40.0	2.0	~10.0	~10.0
10 / 30	10 / 30	10 / 30/ 40	–	5 / 10	3 / 5 / 7/ 10	3 / 5 / 10 / 15 / 30	2 / 3 / 5
14.5	20.7	2.0	528.3	247.9	9.0	31.1	44.7
19.8%	1.2%	–	–	21.2%	–	22.4%	35.8%
n/a	~C$300m	n/a	n/a	n/a	n/a	n/a	n/a
n/a	$100M	n/a	n/a	n/a	n/a	n/a	n/a

SELECT RBC-LED TRANSACTIONS IN 2019

Select Transactions for Canadian Government Issuers

Ontario
CDN 750 million
2.65% Green Bond due 2025
AA(L)/Aa3/A+
Joint Bookrunner
November 2019

Québec
USD 1.0 billion
2.50% Notes due 2024
A(H)/Aa2/AA-
Joint Bookrunner
April 2019

Alberta
SEK 2.5 billion
1.4025% Notes due 2029
AA/Aa1/A+
Sole Bookrunner
February 2019

Manitoba
GBP 325 million
1.50% Notes due 2022
A(H)/Aa2/A+
Joint Bookrunner
January 2019

Canada Housing Trust / Fiducie du Canada pour l'habitation
CDN 4.5 billion
C$2.5 billion FRN due 2024
C$2 billion 2.65% due 2028
AAA/Aaa/AAA
Joint Bookrunner
February 2019

Canada
USD 3.0 billion
2.625% Notes due 2022
AAA/Aaa/AAA
Joint Bookrunner
January 2019

PSP Investissements / Investments
CDN 750 million
2.05% Notes due 2030
AAA/Aaa/AAA
Joint Bookrunner
December 2019

EDC
CDN 500 million
1.65% Green Bond due 2024
AAA/Aaa/AAA
Joint Bookrunner
July 2019