RBC Capital Markets

2018 Canadian Debt Capital Markets

Commentary and Market Review

TABLE OF CONTENTS

A YEAR IN REVIEW

As 2018 comes to a close, we reflect on another very active year in the Canadian bond market, which has seen corporate volumes reaching just shy of C$100 billion, representing the fourth most active year in history. Transactions benefitted through most of 2018 from strong demand, notable orderbook oversubscription and minimal new issue concessions. Financials were active, pricing upwards of C$57 billion of volume, though lighter Q4 activity resulted in sector supply declining 7% versus 2017. Maple activity was healthy with C$9 billion of issuance representing the second most active year post-crisis. The BBB space also demonstrated strong activity in 2018 with C$30.4 billion of supply marking the second most active year on record, while floating rate supply of C$14.5 billion outpaced the prior year by a factor of over three times. The relatively nascent C$ hybrid market continued its growth in 2018 and offers corporate issuers a tax-advantaged and rating agency friendly source of capital. The domestic high yield market also had another active year having priced C$1.8 billion of supply with the bulk of activity originating from non-energy issuers. The Government market remained active in Canada with domestic supply of C$113 billion ending 6% ahead of 2017, while offshore funding totaled C$20.3 billion and represented nearly a quarter of public sector supply during the year.

Market tone over the course of H1 was characterized by relative stability and a historically low credit spread environment that drove volumes to a record in the first half. However, sentiment began to deteriorate through the latter part of the year as ongoing headlines relating to trade, rising interest rates and Brexit, compounded by a softer equity and commodity market backdrop, led to wider credit spreads and lighter-than-expected supply to close out the year. Looking forward, credit spreads will likely be characterized by continued volatility and a bias to further widening early in 2019, although a lighter maturity schedule and pent-up cash from diminished supply in late 2018 have the potential to provide a technical offset. Rate markets are expected to also experience volatility but gradually trend higher through 2019.

We anticipate corporate volumes to remain healthy in 2019, albeit modestly lower than the last several years of fairly elevated issuance. Furthermore, the maturity schedule for 2019 is ~20% lighter than the average of the three prior years with only ~C$58 billion of maturities coming due, mostly attributable to a trough in financial maturities in 2019 versus prior years (-40%). Government volumes are expected to remain steady in 2019 with an expectation for higher activity from provincial issuers as they look to complete any remaining funding ahead of their March 31 fiscal year-end, and begin prefunding for the upcoming government year. Canada Housing Trust's borrowing requirements are expected to be ~C$40 billion (in line with previous years), while municipal new issue supply is expected to be similar to 2018.

As in previous years, RBC Capital Markets was able to leverage its global fixed income platform, industry-leading advisory practice, proven execution experience and leading secondary trading capabilities to earn the trust and confidence of our clients. We continue to focus on providing innovative and timely solutions and on helping our clients navigate the evolving market conditions by delivering solutions-oriented funding advice with a view to best execution. Through our client-focused approach, we are proud to have maintained our position as the leading underwriter of Canadian corporate bonds for the 20th consecutive year.

Thank you for your continued support and confidence in us throughout 2018. We look forward to working closely with you in 2019.

Rob Brown
Managing Director and Co-Head
Debt Capital Markets, Canada
RBC Capital Markets

Patrick MacDonald
Managing Director and Co-Head
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RBC Capital Markets

CANADIAN INVESTORS CONTINUED TO DEMONSTRATE A STRONG APPETITE FOR CORPORATE CREDIT THROUGH MOST OF 2018 AS EVIDENCED BY MODERATE NEW ISSUE CONCESSIONS, OVERSUBSCRIBED ORDERBOOKS AND BROAD DISTRIBUTION SUPPORTED BY A STEADY SUPPLY-DEMAND IMBALANCE. HOWEVER, SOFTER MARKET TONE IN Q4 PUSHED CONCESSIONS WIDER, WHILE PARTICIPATION LEVELS MODERATED AMIDST NET REDEMPTION ACTIVITY INTO CALENDAR YEAR-END.

2018 CANADIAN DEBT CAPITAL MARKETS – MARKET COMMENTARY

Canadian Market Remained Strong and Supported by a Constructive Funding Environment

The Canadian debt capital markets continued to provide both domestic and foreign-domiciled issuers with an attractive funding environment over the course of the year, and remained constructive through periods of broad market volatility that characterized the start and close of the calendar year. Issuers were able to capitalize on a relatively stable funding environment through the first half of the year to print a record volume of supply with credit spreads remaining attractive from a historical standpoint. However, heightened volatility through the second half compounded by a persistent rout in commodity and equity markets deteriorated credit market tone and moderated issuance with Q4 experiencing the slowest pace of new issue supply since the financial crisis. Nevertheless, we anticipate new issue volumes to remain healthy in the new year as issuers evaluate the market for steady tone in completing their funding requirements.

Canadian investors continued to demonstrate a strong appetite for corporate credit through most of 2018 as evidenced by moderate new issue concessions, oversubscribed orderbooks and broad distribution supported by a steady supply-demand imbalance. However, softer market tone in Q4 pushed concessions wider, while participation levels moderated amidst net redemption activity into calendar year-end.

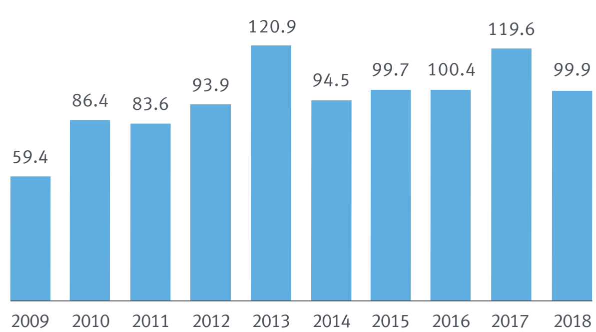
RBC Capital Markets remains active in arranging and hosting fixed income investor marketing events for our corporate and government clients. Notably, we hosted several well-attended industry conferences, including the Telecommunications & Media Conference, Canadian Real Estate Unsecured Debt Conference, Corporate & Energy Infrastructure Conference, Canadian High Yield Conference, Green Bond Conference, Canadian Municipal Symposium, and Canadian Public Sector Borrowers Roundtable.

Corporate Bond Market

Corporate issuance in 2018 marked the fourth most active year of all-time as issuers capitalized on a steadily improving macroeconomic landscape through most of the year and a sustained investor bid for corporate credit to print C$99.9 billion of new issue supply. The healthy level of primary supply is indicative of the capacity of the Canadian market to absorb significant volumes from a wide range of domestic and foreign-domiciled issuers.

Corporate issuance during the year was dominated by financial supply, which totaled C$57 billion in 2018, though represented a 7% decline year-over-year as a result of the slowest Q4 for new issue activity in almost a decade. Non-financial corporate sectors experienced relatively lighter volumes after setting a record in 2017 with C$35.9 billion of supply, representing a 30% decrease year-over-year. The decline was largely attributable to subdued issuance from the energy/natural resources, utilities, telecommunications and consumer/retail sectors, while real estate and infrastructure issuers were proportionately more active. The BBB rated space experienced another banner year with C$30.4 billion of issuance, reporting as the second most active year ever for the space. The Maple sector continued to demonstrate strong activity with C$9 billion of issuance – representing the second highest level of supply post-crisis – as international borrowers continue to evaluate the Canadian market for attractive relative value and diversification opportunities. Floating rate issuance was also exceptionally strong in 2018 with C$14.5 billion of FRN supply, an increase of over three times the prior year, and the highest post-crisis when excluding Canadian banks. The corporate hybrid market continued its growth in 2018 with Enbridge and ATCO collectively pricing C$950 million of volume, building on momentum for corporate hybrids. The domestic high yield market also had another active year with C$1.8 billion of supply, with the bulk of activity originating from non-energy issuers.

CORPORATE DEBT ISSUANCE
C$ BILLIONS



Issuance from January 1, 2009 to December 31, 2018
Source: RBC Capital Markets

RBC Capital Markets maintained its #1 position in the Canadian corporate bond market in 2018, with a market share of 29.5% across 85 issues and a C$4.5+ billion margin in league table credit ahead of our next closest competitor. Of particular note, 2018 marked the 20th consecutive year that RBC Capital Markets ranked #1 in the Bloomberg Canadian corporate league table, a position we've held each year since they were first published in 1999 (excludes self-led bank issuance).

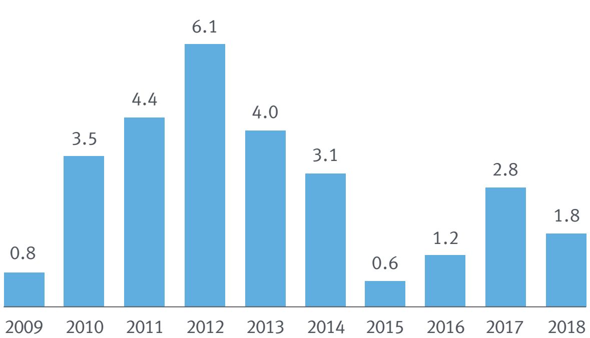
High Yield

The Canadian high yield market had an active year with C$1.8 billion of new issue supply priced across 12 transactions. Although 2018 experienced lower nominal volumes versus the prior year—mainly due to larger deal sizes in 2017—it featured a resurgence of diversified high yield issuance as nearly three-quarters of supply originated from non-energy names, which compares to just over half in 2017. Nevertheless, the energy sector remained active with E&P issuers printing C$420 million of new supply over the course of the year. 2018 also featured inaugural issuances from 4 new names in the Canadian high yield market, which represented C$705 million, or 39% of total issuance. 'B rated' and unrated issuance totaled C$855 million in 2018 and comprised 48% of total supply during the year as yield-seeking investors continued to demonstrate a higher risk tolerance towards the lower end of the rating spectrum.

RBC's North American high yield platform remains underpinned by its leading capital markets advisory practice, the strength of its distribution capabilities, and unparalleled expertise in new issue execution. RBC's distribution network also encapsulates a deep retail system that has meaningfully supported the growth of a nascent market for rated retail-targeted securities and listed senior hybrid debentures.

HIGH YIELD DEBT ISSUANCE

C$ BILLIONS



Issuance from January 1, 2009 to December 31, 2018
Source: RBC Capital Markets

Hybrid Market

The Canadian corporate hybrid market has experienced steady issuance since TransCanada Trust's inaugural C$ corporate hybrid offering in May 2017. During 2018, Enbridge and ATCO were active in the space and collectively printed C$950 million in C$ corporate hybrid supply. Notably, ATCO issued an inaugural 60NC10-year offering, which was the first hybrid bond offering completed as a private placement in the Canadian market. The notes incorporated a number of minor structural modifications that enabled 50% equity treatment from DBRS – also a market first.

Canadian issuers remained active in the US$ hybrid bond market in 2018, which was illustrated by Enbridge and Algonquin Power & Utilities both accessing the US$ hybrid market via both institutional and retail formats for over US$1.7 billion of supply in 2018. The nascent C$ corporate hybrid market is expected to continue to expand in 2019 as well-established issuers look to access a new source of junior capital that is tax-deductible and receives favourable "equity treatment" from rating agencies. In addition, investors continue to demonstrate strong demand for hybrid product as yield-seeking remains prevalent amidst the current market environment.

Cross-Border Activity

Offshore Supply

Canadian issuers have been particularly active in global debt markets in recent years, as they have looked to capitalize on favourable funding costs on a swapped-equivalent basis, investor diversification, depth of demand, and in select cases, to satisfy natural currency requirements. In 2018, offshore activity continued to expand, with Canadian issuers raising an aggregate of ~US$209 billion (including financial issuance of ~US$195 billion) primarily across USD, GBP, and EUR offerings.

Canadian telcos were particularly active in the USD market with TELUS, Bell, and Rogers all issuing long-dated offerings for US$2.7 billion in aggregate. Rounding out US$ volumes, domestic railway companies, including Canadian Pacific Railway and Canadian National Railway, together issued US$2.1 billion of new supply across three separate offerings across the curve. The long-end was particularly favourable for domestic issuers looking to capitalize on attractive swapped-equivalent all-in pricing, which generated notable savings versus domestic funding alternatives and provided access to significant capacity, especially for long-dated product.

Among non-bank financials, Fairfax Financial Holdings accessed multiple global debt markets during the year, issuing a US$600 million 10-year note, as well as an inaugural Euro trade for €600 million as the company sought to diversify funding sources with the continued expansion of its global business. Great-West Lifeco was also active south of the border having printed an US$800 million dual-tranche offering during the year.

RBC Capital Markets continues to be a market leader in corporate offshore issuance on account of our global capabilities, including our well-established U.S. fixed income platform. RBC Capital Markets also ranks as the fastest growing underwriter in both the U.S. investment grade and high yield markets, and is among the top 10 underwriters in U.S. investment grade league tables.

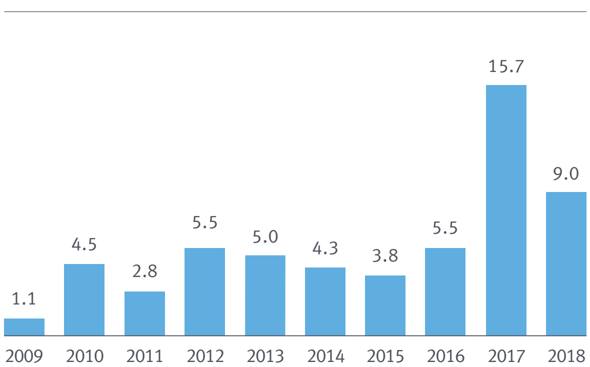
Maple Market

International issuers have remained active in the Canadian market with Maple supply reaching C$9 billion in 2018, surpassing all annual issuance levels post-crisis, with the exception of 2017 (a high-watermark year). Volumes were fairly balanced between corporate and financial issuers as C$4.8 billion, or 53% of total Maple supply, originated from non-financial corporates, while financial borrowers comprised the balance, which aggregated to C$4.3 billion, or 47% of annual Maple issuance.

The non-financial corporate space featured two inaugural C$ issuers, including global confectionary, food and beverage giant, Mondelez International, which printed a C$600 million 7-year offering, and German-based real estate company, Aroundtown SA, which printed a C$250 million 7-year offering. Also of note, Heathrow Funding Ltd. issued a C$400 million 12-year note, which represented the longest-dated Maple transaction from a UK issuer in the Canadian market on record, while AT&T's C$2 billion dual-tranche 10 and 30-year offering represented the second largest non-financial C$ transaction of all time. The balance of corporate Maple supply comprised a C$650 million 10-year offering from Transurban Finance, an Australian toll road operator, and a C$450 million 7-year note from BP Capital Markets, a financing arm of the oil & gas giant. Among financial issuers, Lloyds returned to the C$ market for the first time since 2011 with a C$500 million 7-year holdco offering and followed up later in the year with a C$1 billion opco 5-year FRN. In addition, Morgan Stanley, Goldman Sachs and Bank of America all accessed the Maple market in 2018 with callable structures.

MAPLE DEBT ISSUANCE

C$ BILLIONS



Issuance from January 1, 2009 to December 31, 2018
Source: RBC Capital Markets

Canada continues to offer funding diversification opportunities and ample capacity for international borrowers looking to capitalize on favourable funding dynamics, in addition to a sophisticated and deep investor base with demonstrated appetite for diversified exposure to well-branded and high-quality international credits.

Financial Sector

Financial sector issuance remained robust at C$57 billion, which comprised 57% of total corporate volume in 2018. Relative to the prior year, however, supply declined by 7% primarily due to a reduction in syndicated NHA MBS activity along with lower insurance and non-domestic supply. The major Canadian banks continued to account for a significant proportion of issuance at C$38.7 billion, including C$3.3 billion of covered bonds that also included an inaugural deal from BMO as the domestic covered bond market continued to develop. Deposit Note volume remained steady over the course of the year in advance of the implementation of the Canadian bail-in framework that came into effect in September. Royal Bank of Canada was first to market with its inaugural C$2 billion 5-year bail-in transaction. This deal was followed by a US$1.8 billion 5-year fixed/floating trade south of the border, which, combined with the previous week's C$ offering, established two liquid benchmarks in key funding markets for RBC.

Within the broader financial space, the captive finance sector posted near-record issuance of ~C$11 billion, which was in-line with the prior year driven largely by automotive names. Despite industry headwinds, automotive credits were generally well-received as highlighted by Volkswagen's return to the Canadian market following a three-year absence, pricing C$2.25 billion across two separate offerings during the year.

Additionally, the focus on Socially Responsible Investing continued to gain traction with a broadening issuer base as Manulife Financial priced its inaugural Green Bond offering in the Canadian market, and second globally, following the establishment of the company's Green Bond framework. This trend is expected to gain further momentum with a number of corporate issuers evaluating the Green Bond market for potential near-term issuance opportunities.

AS IN PREVIOUS YEARS, RBC CAPITAL MARKETS WAS ABLE TO LEVERAGE ITS GLOBAL FIXED INCOME PLATFORM, INDUSTRY-LEADING ADVISORY PRACTICE, PROVEN EXECUTION EXPERIENCE AND LEADING SECONDARY TRADING CAPABILITIES TO EARN THE TRUST AND CONFIDENCE OF OUR CLIENTS.

DEPOSIT NOTE VOLUME REMAINED STEADY OVER THE COURSE OF THE YEAR IN ADVANCE OF THE IMPLEMENTATION OF THE CANADIAN BAIL-IN FRAMEWORK THAT CAME INTO EFFECT IN SEPTEMBER.

Looking ahead to 2019, financial sector supply is expected to be dictated by broader market sentiment given expectations of a more challenging backdrop. Issuance by the Canadian banks should remain relatively steady, although aggregate volume may be lower than prior years if loan book growth slows in response to weaker market fundamentals, along with a smaller maturity profile versus the prior year. In the interim, while the market awaits a second C$ bail-in trade by a Canadian D-SIB, relative pricing differentials across global markets and products appear supportive of further covered bond issuance, similar to 2018. In this vein, covered bonds in Canada are expected to expand with HSBC Bank Canada having recently set up a legislative program and several other financial institutions expected to increase their utilization of this funding vehicle. Notwithstanding notable net new issuance from the automotive finance sector in each of the past two years (~C$10 billion of supply annually), this run-rate may be difficult to sustain for a third consecutive year given industry dynamics. Nevertheless, issuance should remain steady with C$6 billion of maturities for the coming year, while activity in the insurance sector is expected to be limited outside of potential M&A activity as a result of modest sector maturities and the intention for the lifecos to maintain or reduce leverage.

Funding Management Strategies

Notwithstanding the normalizing underlying rate environment, issuers capitalized on a flat forward curve and actively utilized interest rate and currency hedging programs in order to protect against rising yields and/or variability in foreign exchange rates. In particular, a large number of issuers have put in place bond forwards or forward-starting interest rate swaps to hedge against rising interest rates in advance of prospective financings. Over the last year, RBC Capital Markets advised a number of corporate and government clients on relative value opportunities by issuing in foreign-denominated currencies and swapping liabilities to a chosen functional currency in order to capitalize on cross-market funding dynamics.

Looking forward to 2019, as the Canadian and U.S. economies continue to demonstrate meaningful signs of growth and economic improvement, the Bank of Canada and U.S. Federal Reserve are expected to proceed further in tightening monetary conditions. As a result, we expect issuers to proactively make use of bond forwards, interest rate swaps and cross-currency swaps in managing interest rate and currency risk.

Green Bonds

RBC has a long history of environmental leadership dating back to 1991 when we launched our first corporate environmental policy.

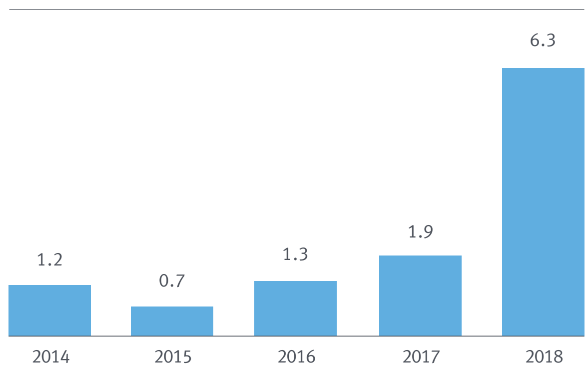
In 2018, RBC published a Climate Change Position and Disclosure Statement outlining the steps that are being taken to manage climate risks and opportunities, and our ongoing commitment to climate-related disclosures. In 2019, we will launch the RBC Climate Action Plan, our new enterprise environmental strategy focused on accelerating clean economic growth and supporting the transition to a low-carbon economy.

Green Bonds are standard fixed income instruments where the proceeds from the offering are applied exclusively to finance or refinance new and/or existing eligible green projects, and which are aligned with the four core components of the Green Bond Principles*.

Global Green Bond issuance peaked in 2017 at ~US$163 billion and currently stands at ~US$143 billion in 2018. USD and EUR are the most prominent currencies of issuance in the Green Bond market, which together account for ~80% of global issuance annually. Development banks originally pioneered the Green

C$ GREEN BOND ISSUANCE

C$ BILLIONS



Issuance from January 1, 2014 to December 31, 2018
Source: RBC Capital Markets

* *Green Bond Principles are voluntary process guidelines that recommend transparency and disclosure and promote integrity in the development of the Green Bond market by clarifying the approach for issuance of a Green Bond. Source: International Capital Market Association.*

Bond market, and were among the most prominent issuers; nonetheless, issuers from other segments of the market have grown significantly into the space over the last few years.

The C$ Green market has grown rapidly over the last three years with 2018 registering an all-time record for C$ Green issuance of C$6.3 billion, representing a growth of 3.9x since 2016. Of particular note, the Green market has continued to gain traction in the corporate space as evidenced by Green transactions from Brookfield Renewable Partners, Manulife, and Ontario Power Generation, while six government issuers completed Green Bond offerings during the year, with inaugural issues from CPPIB, City of Toronto, City of Vancouver and TransLink.

Green Bonds have historically demonstrated strong secondary performance and pricing advantages. Strong new issue orderbooks on Green transactions have continually driven re-offer spreads tighter than initial price thoughts and allowed for outsized placement to 'dark green' investors. Recent Green issues for public sector issuers benefit from a broader international investor following and have generally achieved modest funding advantages relative to traditional offerings.

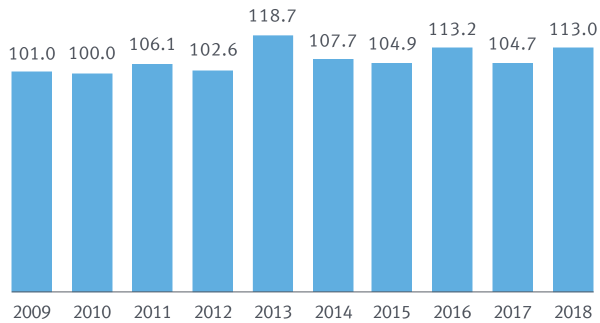
As part of our commitment to further developing the Green Bond market, RBC Capital Markets is hosting our 6th annual Green Bond conference on April 24th in Toronto.

Government Bond Market

It was another active year for Public Sector** issuance in Canada as domestic supply reached C$113 billion, which is a Top 3 year for domestic supply and 6% higher than 2017. Higher provincial borrowing requirements and elevated domestic issuance drove supply in CAD, which was spaced out over the course of the year despite budget blackouts, election blackouts (Ontario and Quebec) and heightened rate volatility in the latter part of the year. Offshore funding for Public Sector issuers totaled C$20.3 billion (eqv.) in 2018, representing 23% of total supply; this level of offshore supply is below the C$29.5 billion (eqv.) in 2017, though well above prior years. USD, EUR and AUD were the key offshore currencies for borrowers in 2018.

The underlying Canada market remained active with C$97.8 billion of issuance across 35 unique auctions (including ultra-longs and RRBs), which was 28% below issuance in 2017. Government of Canada issuance tracked below the proposed debt management figure due to heightened bill issuance and better-than-expected government finances.

GOVERNMENT DEBT ISSUANCE
C$ BILLIONS



Issuance from January 1, 2009 to December 31, 2018. Includes Provincial, Crown, Non-Agented Crowns, and Municipal sectors.
Source: RBC Capital Markets

Provincial borrowing remained robust in 2018 with issuers continuing to focus on 10-year and 30-year maturities to fund ongoing deficits, and slightly more issuance in 10s to close the year. Borrowing needs are expected to rise next year with many provinces anticipating larger programs to fund infrastructure spending and budget deficits. As we conclude 2018, many provinces appear to be in strong funding positions and are tracking ahead of their annual borrowing pace. In light of this, we expect some pre-funding activity for the following fiscal year.

Offshore issuance remained a key component of public sector borrowing in 2018, despite comprising a smaller portion of total supply. Issuers were active across USD, EUR, GBP, AUD and NZD, illustrating the breadth of currencies available to the Canadian public sector. Despite a slower start, there was a return of strategic issuance in USD with issuers paying up modestly for size as domestic spreads widened and volatility remained elevated towards the end of the year. USD remained the currency of choice for many issuers, with 8 offerings completed in each of USD and EUR for proceeds of US$9.5 billion and €4 billion, respectively.

Provincial credit spreads ended the year 20-25 bps wider with the bulk of the widening occurring at year-end, driven by a broad sell-off in risk assets. Inter-provincial relativities experienced a fair amount of movement with various exogenous factors, including commodity prices and fiscal performance, driving inter-provincial spread dynamics through 2018. Canada Housing Trust completed C$39.8 billion of Canada Mortgage Bonds (CMBs) in 2018 across eight transactions, marginally below the maximum authorized amount for new CMB guarantees by CMHC, but largely in-line with prior years.

*** Public Sector volumes comprise Provincial, Crown, Non-Agented Crowns, and Municipal sectors.*

C$ GREEN BOND ISSUANCE REGISTERED AN ALL-TIME RECORD IN 2018. SSA CLIENTS PRICED SOME OF THE LARGEST C$ GREEN OFFERINGS TO DATE, WHILE CORPORATE ISSUERS CONTINUED TO EXPAND INTO THE NASCENT MARKET.

The program once again demonstrated flexibility around sizing of new issues, which facilitated navigation through all types of market conditions. The CMB program continued to experience both a strong bid domestically as well as healthy demand from international buyers, with 32% of new issues placed outside of Canada. CMB spreads have closed the year ~10 bps wider in 5s and ~15 bps wider in 10s.

Non-Agented Crowns including CPPIB and PSP were also key issuers in the domestic public sector market, completing two offerings for C$2.8 billion. CPPIB issued a C$1.5 billion 10-year Green Bond, which represented CPPIB's inaugural Green issue and registered as the largest Green Bond issued in CAD. PSP was also active in Q4 with a C$1.25 billion 7-year issue that was met with strong investor demand. Sector spreads have closed 12-15 bps wider this year.

Municipal issuers were active in 2018 having priced C$5.1 billion of new issue supply, although this came just short of the C$5.2 billion raised in 2017. Recurring issuers returned to the market for their annual funding requirements with select issuers such as MFABC and Montreal upsizing their borrowing needs, which offset reduced issuance from entities such as York and Ottawa. Notably, there were a few issuers that returned to the public debt markets after multi-year absences in 2018, including City of Hamilton and City of Peterborough. 2018 represented a breakthrough year for municipal Green Bond issuance with 3 additional Municipal issuers (Toronto, Vancouver and TransLink) completing Green offerings for C$785 million in aggregate proceeds. Of note, RBC Capital Markets hosted its second Municipal Symposium in April, which was well-received by both issuers and investors. Municipal spreads have been mixed this year with select credits tightening marginally while broad sector pricing (vs. provincials) has drifted 3-6 bps wider across the curve.

Carve-out activity picked up in 2018 and was once again a driver of domestic provincial funding. Carve-out orders are typically placed on behalf of the syndicate to one or more large investors as part of a larger syndicated issue. Historically, in buoyant new issue markets, carve-outs allowed issuers to upsize deals from their typical issue sizes, and in challenging market conditions, issuers were able to access markets that may not have otherwise supported new issuance. Activity was slow to commence, but picked up in the new Government year with 97% of carve-out activity occurring after April 1. During the year, 20 carve-outs were completed for C$6.4 billion, which compares to 14 carve-outs for C$3.6 billion in 2017.

Domestic provincial supply was predominantly skewed to public syndicated issuance (95%) with ~C$6.2 billion in MTN issuance, including FRNs and ultra-long transactions. Provincial FRN issuance in 2018 totaled C$5.3 billion as compared to C$4.0 billion in 2017 with Ontario printing the lion's share with a C$2.65 billion 5-year issue in August. Strong investor demand for yield and a flatter Canada curve supported 6 ultra-long transactions for C$850 million, modestly lower than C$2.1 billion in 2017.

RBC Capital Markets was the leading dealer for public sector issuers in 2018, ranking #1 on Bloomberg's Government league table and having led 68 transactions for C$21.3 billion (excluding Quebec). RBC Capital Markets led a number of landmark transactions in the public sector this year, including several inaugural Green Bond offerings. RBC is a thought leader in the evolving Green Bond market, having hosted its 5th annual Green Bond Conference, and remains the only dealer to have acted as Lead on all Green Bond offerings within the public sector to date in Canada.

THE ECONOMIC OUTLOOK FOR 2019

Commentary by Mark Chandler, Managing Director and Head of Canadian Rates Strategy and Simon Deeley, Rates Strategist

2018 started with a high degree of uncertainty on the number and timing of rate hikes from the Bank of Canada (BoC). A barnstorming December employment report ultimately led to a January move, while a pick-up in growth after a transitory slowdown in Q1 led to a hike in each of Q3 and Q4, taking the overnight rate to 1.75%. BoC communication has also shifted from noting "some monetary accommodation would be needed to keep inflation on target" in April to rates "will need to rise to a neutral stance to achieve the inflation target" in October. The BoC has been consistent in emphasizing their data dependency and flexibility on the pacing of future hikes throughout. The average of the BoC's three core inflation measures has been about 2% since February, reinforcing the central bank's view that the economy continues to operate close to full capacity.

Moving to the year ahead, the significant reduction in trade uncertainty with NAFTA 2.0 (USMCA) in early October initially saw the January meeting largely priced for a move to 2.00%. However, sharp declines in oil prices and a generally dovish December meeting statement have seen a move largely priced out. We retain our long-held view that two hikes will be warranted in 2019, but now see one each in Q2 and Q3. The lower number of hikes relative to 2018 comes as the impact of previous and expected rate moves on highly indebted households leads to a slowing in consumption and residential investment. Our combined forecast contribution from the two categories (0.8pp) is 0.5pp below that of the BoC in their latest Monetary Policy Report. This would be the smallest contribution from the categories since 2009 and, in large part, is why we see the BoC pausing at an overnight rate of 2.25%, before hiking to its longstanding 2.5-3.5% neutral range in 2020.

The well-worn growth rotation story to exports and business investment is being counted on by the BoC to offset a more moderate slowing in the housing and household sectors. The USMCA deal eliminates the downside risk of auto tariffs and greatly reduces trade uncertainty more generally, though global trade risks continue to persist, which could have knock-on effects on the Canadian economy. Moreover, non-energy export volumes have fluctuated around a flat trend since mid-2014 (i.e. before NAFTA uncertainty), with competitiveness and external demand factors – particularly vis-à-vis emerging market countries – both contributing to this. Combined with severe oil transportation issues hampering current exports and future production gains, exports face some headwinds in filling in their side of the bargain. Conversely, non-residential investment has contributed positively to growth for six of the past seven quarters, and capacity pressures in much of the economy, as evidenced in the BoC's Business Outlook Survey and capacity utilization measures, are supportive of this continuing. Energy investment is a wildcard given the recent sharp declines in local and global benchmark prices, but the starting point as a proportion of overall business investment is much lower than at the mid-decade oil price collapse, and so the sensitivity is likely lower as well. Our own forecast (predicated on a bounce in global oil prices) has GDP growth slowing slightly to a pace of 1.7% in 2019, with non-residential investment and net exports adding a combined 0.5pp, which is expected to be equaled by government spending.

The labour market – as measured by the Household Labour Force Survey – has not seen the job gains from 2017 repeated, with about 150K in total through the first eleven months of 2018, though other employment surveys show this number to be higher (and 2017, lower). The unemployment rate has remained around multi-decade lows (5.6-6.0%) through the entire year. As is the case in many developed countries, wage growth is below what one would expect given employment gains and historically low unemployment rates, with the BoC's preferred wage-common measure showing 2.4% versus an expected full employment level of ~3%. On the rates side, we predict continued hiking from the Federal Reserve and increases in U.S. term yields will help push Canadian term yields higher, with the 10y yield finishing well above the sub-2% level seen in late 2018.

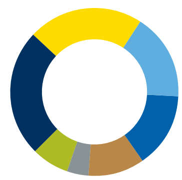
THE AVERAGE OF THE BOC'S THREE CORE MEASURES HAS BEEN ABOUT 2% SINCE FEBRUARY, REINFORCING THE CENTRAL BANK'S VIEW THAT THE ECONOMY CONTINUES TO OPERATE CLOSE TO FULL CAPACITY.

2018 CANADIAN LEAGUE TABLES

JANUARY 1, 2018 – DECEMBER 31, 2018

BLOOMBERG CANADIAN MARKET CORPORATE ISSUES (EXCLUDES SELF-LED BANK ISSUANCE)

	Dealer	Number of Issues	Total C$ (mm)	Market Share (%)
1	**RBC Capital Markets**	**107**	**14,461**	**24.9%**
2	TD Securities	82	12,527	21.5%
3	CIBC	71	9,595	16.5%
4	BMO Capital Markets	66	8,921	15.3%
5	Scotiabank	50	6,005	10.3%
6	HSBC	20	2,339	4.0%
7	National Bank Financial Inc	19	2,212	3.8%
8	Bank of America Merrill Lynch	7	1,000	1.7%
	Other	–	1,081	1.9%
	Grand Total / Number of Deals	172	58,141	100.0%

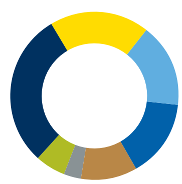


1. Denotes aggregate of "other" dealers.

Source: Bloomberg Canadian Corporate Debt

REFINITIV CANADIAN CORPORATE MARKET – FULL CREDIT TO LEAD (EXCLUDES SELF-LED BANK ISSUANCE)

	Dealer	Number of Issues	Total C$ (mm)	Market Share (%)
1	**RBC Capital Markets**	**85**	**15,451**	**29.5%**
2	TD Securities	56	10,945	20.9%
3	CIBC World Markets	48	8,500	16.2%
4	BMO Capital Markets	44	7,736	14.8%
5	Scotiabank	31	5,393	10.3%
6	National Bank Financial	19	1,657	3.2%
7	HSBC	5	1,127	2.2%
8	Desjardins Capital Markets	5	466	0.9%
	Other	–	1,039	2.0%
	Grand Total / Number of Deals	127	52,314	100.0%

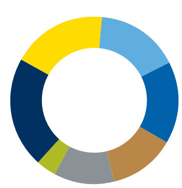


1. Denotes aggregate of "other" dealers.

Source: Refinitiv Canadian Corporate Market

REFINITIV CANADIAN MARKET – COMBINED CORPORATE & SSA (EXCLUDES SELF-LED BANK ISSUANCE)

	Dealer	Number of Issues	Total C$ (mm)	Market Share (%)
1	**RBC Capital Markets**	**133**	**35,494**	**21.5%**
2	TD Securities	102	30,157	18.3%
3	CIBC World Markets	120	26,917	16.3%
4	National Bank Financial	203	26,245	15.9%
5	BMO Capital Markets	74	20,522	12.4%
6	Scotiabank	57	19,592	11.9%
7	HSBC	14	2,962	1.8%
8	Desjardins Capital Markets	11	1,198	0.7%
	Other	–	1,996	1.2%
	Grand Total / Number of Deals	435	165,099	100.0%



1. Denotes aggregate of "other" dealers.

Source: Refinitiv Canadian Market

SELECT RBC-LED TRANSACTIONS IN 2018

Select Offshore Transactions for Canadian Corporate Issuers

TELUS
USD 750 million
4.600% Notes due 2048
Joint Bookrunner
June 2018

GREAT-WEST LIFECO INC.
USD 800 million
USD 300 million
4.047% Notes due 2028
USD 500 million
4.581% Notes due 2048
Joint Bookrunner
May 2018

ENBRIDGE
USD 600 million
6.375% 60NC5
Fixed-to-Floating Rate
Subordinated Notes
Joint Bookrunner
April 2018

FAIRFAX FINANCIAL HOLDINGS LIMITED
EUR 600 million
2.750% Notes due 2028
Joint Bookrunner
March 2018

Bell
USD 750 million
4.464% Notes due 2048
Joint Bookrunner
March 2018

CN
USD 900 million
USD 300 million
2.400% Notes due 2020
USD 600 million
3.650% Notes due 2048
Joint Bookrunner
February 2018

FAIRFAX FINANCIAL HOLDINGS LIMITED
USD 600 million
4.850% Notes due 2028
Joint Bookrunner
February 2018

ROGERS
USD 750 million
4.300% Notes due 2048
Joint Bookrunner
February 2018

Select Offshore Transactions for Canadian Government Issuers

Alberta
USD 2.25 billion
3.350% Notes due 2023
Joint Bookrunner
October 2018

New Brunswick Nouveau
USD 500 million
3.625% Notes due 2028
Joint Bookrunner
May 2018

EDC
GBP 750 million
FRN due 2023
Joint Bookrunner
May 2018

Alberta
EUR 1.5 billion
0.625% Notes due 2025
Joint Bookrunner
April 2018

Manitoba
AUD 50 million
3.500% Notes due 2028
Sole Lead
April 2018

Québec
AUD 65 million
3.250% Notes due 2028
Joint Bookrunner
April 2018

CPP INVESTMENT BOARD
USD 500 million
FRN due 2019
Joint Bookrunner
March 2018

EDC
USD 1 billion
2.300% Notes due 2020
Joint Bookrunner
February 2018

Select EUR Transactions

Volkswagen	EUR 4.25 billion	FRN due 2024 2.625% Notes due 2027 3.250% Notes due 2030 4.125% Notes due 2038	Joint Bookrunner	November 2018
VINCI Energies	EUR 1.75 billion	1.000% Notes due 2025 1.750% Notes due 2030	Joint Bookrunner	September 2018
unibail·rodamco	EUR 3 billion	0.125% Notes due 2021 1.125% Notes due 2025 1.875% Notes due 2031 2.250% Notes due 2038	Joint Bookrunner	May 2018
SANOFI	EUR 8 billion	FRN due 2020 0.000% Notes due 2020 0.500% Notes due 2023 1.000% Notes due 2026 1.375% Notes due 2030 1.875% Notes due 2038	Joint Bookrunner	March 2018

Select GBP Transactions

AT&T	GBP 750 million	2.900% Notes due 2026	Joint Bookrunner	September 2018
vodafone	GBP 500 million	4.875% 60NC7 Notes due 2078	Joint Bookrunner	September 2018
PRUDENTIAL	GBP 1.25 billion	5.625% 33NC13 Notes 6.250% 50NC30 Notes	Joint Bookrunner	September 2018
European Investment Bank	GBP 1 billion	SONIA FRN due 2023	Joint Bookrunner	June 2018

Select USD Transactions

UnitedHealth Group	USD 4 billion	FRN due 2021 3.150% Notes due 2021 3.500% Notes due 2023 3.850% Notes due 2028 4.250% Notes due 2048	Joint Bookrunner	June 2018
vodafone	USD 11.5 billion	FRN due 2024 3.750% Notes due 2024 4.125% Notes due 2025 4.375% Notes due 2028 5.000% Notes due 2038 5.250% Notes due 2048	Joint Bookrunner	May 2018
AIG	USD 2.5 billion	4.200% Notes due 2028 4.750% Notes due 2048 5.750% 30NC10 Junior Subordinated Notes due 2048	Joint Bookrunner	March 2018
Sempra Energy	USD 5 billion	FRN due 2019 FRN due 2021 2.400% Notes due 2020 2.900% Notes due 2023 3.400% Notes due 2028 3.800% Notes due 2038 4.000% Notes due 2048	Lead Left Bookrunner	January 2018

Select AUD Transactions

SAFA South Australian Government Financing Authority	AUD 1 billion	3.000% Notes due 2028	Joint Lead Manager	November 2018
ING ING Bank (Australia) Limited	AUD 1 billion	Floating Rate Covered Bond due 2021 Fixed Rate Covered Bond due 2023	Joint Bookrunner	August 2018
Volkswagen Financial Services Australia	AUD 350 million	3.300% Notes due 2022	Joint Bookrunner	August 2018
European Investment Bank	AUD 750 million	2.700% Notes due 2023	Joint Lead Manager	January 2018

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