



ROYAL BANK OF CANADA

(a Canadian chartered bank)

1st Supplementary Notes Base Prospectus dated December 19, 2018

Pursuant to the Programme for the Issuance of Securities

Pages i to 168 (inclusive) of the Notes Base Prospectus dated September 24, 2018 (the “**Notes Base Prospectus**”) of Royal Bank of Canada (“**RBC**” or the “**Issuer**”) comprise a base prospectus (the “**Base Prospectus**”) for the purposes of Article 5.4 of the Prospectus Directive (as defined herein) in respect of notes (“**PD Notes**” or “**Notes**”) to be offered to the public in the Relevant Member States (as defined in the Base Prospectus) and/or to be admitted to the Official List of the Financial Conduct Authority (in its capacity as competent authority for the purposes of Part VI of the Financial Services and Markets Act 2000 as amended, the “**UK Listing Authority**”) and admitted to trading on the Regulated Market of the London Stock Exchange plc (the “**London Stock Exchange**”). Pages 169 to 251 (inclusive) of the Notes Base Prospectus comprise an offering circular (the “**Offering Circular**”), which has been prepared by the Issuer in connection with the issue of Notes other than PD Notes (“**Non PD Notes**”). The Offering Circular has not been reviewed or approved by the UK Listing Authority and does not constitute a base prospectus for purposes of the Prospectus Directive.

SUPPLEMENTARY PROSPECTUS

Pages 1 to 16 inclusive of this supplement (the “**1st Supplementary Prospectus**”) constitute a supplementary prospectus for purposes of Section 87G of the *Financial Services and Markets Act 2000* (the “**FSMA**”) prepared in connection with the programme for the issuance of securities established by RBC (the “**Programme**”). The information on pages 17 to 18 inclusive of this supplement constitutes a supplementary offering circular and does not form part of this 1st Supplementary Prospectus.

Terms defined in the Base Prospectus have the same meaning when used in this 1st Supplementary Prospectus. The 1st Supplementary Prospectus is supplemental to, and shall be read in conjunction with, the Base Prospectus and any other supplements to the Base Prospectus issued by RBC.

RBC accepts responsibility for the information in this 1st Supplementary Prospectus. To the best of the knowledge of RBC, having taken reasonable care to ensure that such is the case, the information contained in this 1st Supplementary Prospectus is in accordance with the facts and does not omit anything likely to affect the import of such information.

The purpose of this 1st Supplementary Prospectus is to (a) incorporate by reference in the Base Prospectus the Issuer’s latest audited consolidated financial statements and management’s discussion and analysis thereof and Annual Information Form; (b) include a new statement in respect of no material adverse change and significant change; (c) in light of the issuance of the 2018 MD&A (as defined below), revise the Top and emerging risk factors, Credit risk, Operational risk, and Legal and regulatory environment risk factors; (d) update the Issuer’s Programme rating disclosure, including adding a reference to short-term debt by Moody’s Canada Inc. (“**Moody’s Canada**”) and by S&P Global Ratings, acting through S&P Global Ratings Canada, a business unit of S&P Global Canada Corp. (“**S&P Canada**”); (e) update paragraph 3 of the section entitled “General Information and Recent Developments” in the Base Prospectus regarding governmental, legal or arbitration proceedings which may have, or have had, a significant effect on the financial position or

profitability of the Issuer or of the Issuer and its subsidiaries taken as a whole; and (f) update Element B.4b of the Programme Summary to reflect new disclosure incorporated by reference, Element B.12 of the Programme Summary to reflect financial information incorporated by reference, Element B.17 of the Programme Summary to reflect the short-term debt ratings for issues of Notes, and Element D.2 of the Programme Summary to reflect the changes to the Issuer risk factors by virtue of this 1st Supplementary Prospectus

To the extent that there is any inconsistency between (a) any statement in this 1st Supplementary Prospectus or any statement incorporated by reference into the Base Prospectus by this 1st Supplementary Prospectus and (b) any other statement in, or incorporated by reference in, the Base Prospectus, the statements in (a) above will prevail.

Save as disclosed in this 1st Supplementary Prospectus, no significant new factor, material mistake or inaccuracy relating to the information included in the Base Prospectus which is capable of affecting the assessment of PD Notes issued under the Programme has arisen or been noted, as the case may be, since the publication of the Notes Base Prospectus.

DOCUMENTS INCORPORATED BY REFERENCE

The following documents are, by virtue of this 1st Supplementary Prospectus, incorporated in, and form part of, the Base Prospectus:

- (i) RBC's Annual Information Form dated November 27, 2018 (the "**2018 AIF**");
- (ii) the following sections of RBC's 2018 Annual Report (the "**2018 Annual Report**") for the year ended October 31, 2018:
 - (a) the Management's Discussion and Analysis on pages 12 through 112 (the "**2018 MD&A**"); and
 - (b) the audited annual consolidated financial statements, which comprise the consolidated balance sheets as at October 31, 2018 and October 31, 2017, and the consolidated statements of income, statements of comprehensive income, statements of changes in equity, and statements of cash flows for each of the years in the two-year period ended October 31, 2018, and the related notes, which comprise a summary of significant accounting policies and other explanatory information, prepared in accordance with International Financial Reporting Standards as issued by the International Accounting Standards Board on pages 113 through 211, together with Management's Report on Internal Control over Financial Reporting as of October 31, 2018, and the Report of Independent Registered Public Accounting Firm thereon on pages 114 and 115, respectively, (the "**2018 Audited Consolidated Financial Statements**"),

the remainder of the 2018 Annual Report is either not relevant for prospective investors or covered elsewhere in this 1st Supplementary Prospectus and is not incorporated by reference.

The 2018 AIF, the 2018 Annual Report, which includes the 2018 Audited Consolidated Financial Statements and the 2018 MD&A have been filed with Morningstar plc (appointed by the Financial Conduct Authority to act as the National Storage Mechanism), are available for viewing at <http://www.morningstar.co.uk/uk/NSM> and have been announced via the Regulatory News Service operated by the London Stock Exchange.

For the avoidance of doubt, any document incorporated by reference in the 2018 AIF, the 2018 Audited Consolidated Financial Statements and the 2018 MD&A shall not form part of this 1st Supplementary Prospectus.

Copies of this 1st Supplementary Prospectus, the Base Prospectus and the documents incorporated by reference in either of these can be (i) viewed on the website of the Regulatory News Service operated by the London Stock Exchange at <http://www.londonstockexchange.com/exchange/news/market-news/market-news-home.html> under the name of the Issuer and the headline “Publication of Prospectus”; and (ii) obtained on written request and without charge from (a) the Issuer at 155 Wellington St. W, 13th Floor, Toronto, Ontario, Canada M5V 3K7, Attention: Senior Vice President, Performance Management & Investor Relations, and (b) the office of the Issuing and Paying Agent, The Bank of New York Mellon, London Branch, One Canada Square, London E14 5AL, United Kingdom, Attention: Manager, EMEA Corporate & Sovereign. Certain of the documents incorporated by reference in the Base Prospectus or this 1st Supplementary Prospectus may be viewed by accessing the Issuer’s disclosure documents through the Internet (a) at the Canadian System for Electronic Document Analysis and Retrieval at www.sedar.com (an internet based securities regulatory filing system), and (b) at the United States Securities and Exchange Commission’s website at <http://www.sec.gov>. These websites are not incorporated in, and do not form part of, the Base Prospectus.

STATEMENT OF NO SIGNIFICANT CHANGE

Since October 31, 2018, the last day of the financial period in respect of which the most recent audited consolidated financial statements of the Issuer have been prepared, there has been no significant change in the financial position of the Issuer and its subsidiaries taken as a whole.

STATEMENT OF NO MATERIAL ADVERSE CHANGE

Since October 31, 2018, the date of its last published audited consolidated financial statements, there has been no material adverse change in the prospects of the Issuer and its subsidiaries taken as a whole.

RISK FACTORS

The section entitled “Risk Factors” in the Registration Document incorporated by reference in the Prospectus is amended by:

- (i) Replacing the “Top and emerging risks” section with the following:

The Issuer’s view of risks is not static. An important component of the Issuer’s risk management approach is to ensure that top risks and emerging risks, as they evolve, are identified, managed, and incorporated into the Issuer’s existing risk management assessment, measurement, monitoring and escalation processes.

A top risk is a risk already identified and well understood that could materially impact the Issuer’s financial results, reputation, business model, or strategy in the short to medium term.

The table below sets out the risk factors that the Issuer currently considers its top risks but it should be highlighted that the risks set out in the table are not exhaustive and investors should consider all the risk factors disclosed in the Risk Factors section.

Top Risks	Description
<p align="center">Information Technology and Cyber Risks</p>	<p>Information technology (IT) and cyber risks remained as key risks, not only for the financial services sector, but for other industries worldwide. Due to the size, scale, and global nature of the Issuer's operations, the Issuer's heavy reliance on the internet to conduct day-to-day business activities, and the Issuer's evolving intricate technological infrastructure, the Issuer is subject to heightened risks in the form of cyber-attacks, data breaches, cyber extortion and similar compromises. The Issuer's use of third party service providers, which are also subject to these potential compromises, increases the Issuer's risk of a potential attack, breach or disruption as the Issuer has less immediate oversight over their IT domain. Additionally, clients' use of personal devices can create further avenues for potential cyber-related incidents as the Issuer has little or no control over the safety of these devices. As the volume and sophistication of cyber-attacks continues to increase, the resulting implications could include business interruptions, service disruptions, financial loss, theft of intellectual property and confidential information, litigation, enhanced regulatory attention and penalties, and reputational damage. Furthermore, the adoption of emerging technologies, such as cloud computing, artificial intelligence and robotics, call for continued focus and investment to manage the Issuer's risks effectively.</p>
<p align="center">Global Uncertainty</p>	<p>Global uncertainty remained a top risk throughout 2018. The United States administration continued to advocate for policy changes, particularly those related to trade which added to overall global uncertainty and volatility. The Canadian economy continues to face specific risks with respect to the evolving trade environment. Concerns also remain around the social, political and economic impacts of the changing political landscape in Europe, including the final outcome of Brexit negotiations. In addition, there are growing concerns over an economic slowdown in emerging markets in light of capital outflows in favour of developed markets and expected interest rate increases. Broader geopolitical tensions remained high amongst the United States, Russia, China, and across the Middle East.</p>
<p align="center">Canadian Housing and Household Indebtedness</p>	<p>While the Canadian economy continued to grow and low unemployment rates prevailed this fiscal year, the housing market remained a concern for the Canadian financial system, although at a diminishing level. Overall housing prices stayed elevated and affordability remained stretched. The measures implemented by the Canadian government and regulators over the past two years to help safeguard homebuyers and financial institutions alike did have the desired effect of cooling the market and returning balance to demand-supply conditions. Annual price gains decelerated to low single-digits in key markets, specifically across both the Greater Toronto Area and Greater Vancouver Area. However, as the Bank of Canada continues to be on a path of gradually raising interest rates, this could have materially negative credit implications for the Issuer's broader consumer lending activities in the future given current levels of elevated household indebtedness.</p>

Regulatory Changes	The Issuer operates in multiple jurisdictions, and the continued introduction of new or revised regulations leads to increasing focus across the organization on meeting higher regulatory requirements across a number of different markets. Financial and other reforms coming on stream in multiple jurisdictions continue to provide challenges and impact the Issuer's operations and strategies.
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An emerging risk is one that could materially impact the Issuer's financial results, reputation, business model, or strategy, but is distinguished by a lack of clarity with respect to the probabilities, impacts, timing, and/or ranges of potential outcomes. The Issuer is actively monitoring its emerging risks, which include the following:

Emerging Risks	Description
Digital Disruption and Innovation	Evolving consumer behaviour, the expansion of online shopping and the emergence of disruptors are creating competitive pressures across a number of sectors. In addition, established technology companies, newer competitors, and regulatory changes continue to foster new business models that could challenge traditional banks and financial products. The adoption of new technologies, such as Artificial Intelligence, Robotic Process Automation and Blockchain could result in new and complex risks that would need to be managed effectively.
Data and Third Party Related Risks	The management, use, and protection of data are becoming increasingly important, particularly given the adoption of the General Data Protection Regulation (GDPR) by the European Union and its implementation in 2018, and the expected proliferation of similar regulatory frameworks in other markets. Further, as the Issuer increasingly partners with third parties, its potential exposure to regulatory compliance, operational and reputational risk increases.
Climate Change	Extreme weather events and the global transition to a low carbon economy could result in a broad range of impacts, including potential strategic, reputational, structural and credit related risks for the Issuer and its clients in climate sensitive sectors.

(ii) Replacing the "Credit risk" section with the following:

Credit risk is the risk of loss associated with an obligor's potential inability or unwillingness to fulfill its contractual obligations on a timely basis. Credit risk may arise directly from the risk of default of a primary obligor of the Issuer (e.g., issuer, debtor, counterparty, borrower or policyholder), indirectly from a secondary obligor of the Issuer (e.g., guarantor or reinsurer), through off-balance sheet exposures, contingent credit risk and/or transactional risk. Credit risk includes counterparty credit risk from both trading and non-trading activities. The failure to effectively manage credit risk across all the Issuer's products, services and activities can have a direct immediate and material impact on the Issuer's earnings and reputation.

Credit risk is inherent in a wide range of the Issuer's businesses. This includes lending to businesses, sovereigns, public sector entities, banks and other financial institutions, as well as certain individuals and small businesses, which comprise the Issuer's wholesale credit portfolio, and residential mortgages, personal loans, credit cards, and small business loans, which comprise the Issuer's retail credit portfolio. The Issuer's gross credit exposure includes: loans and acceptances outstanding, undrawn commitments, and other exposures, including contingent liabilities such as letters of credit and guarantees, debt securities carried at fair value through other comprehensive income (FVOCI) (available for sale under IAS 39 *Financial Instruments: Recognition and Measurement* (IAS 39)) and deposits with financial institutions, repo-style transactions, and derivatives.

Credit risk also includes (i) counterparty credit risk; and (ii) wrong way risk. Counterparty credit risk is the risk that a party with whom the Issuer has entered into a financial or non-financial contract will fail to fulfil its contractual agreement and default on the obligation. It is measured not only by its current value, but also by how this value can move as market conditions change. Counterparty credit risk usually occurs in trading-related derivative and repo-style transactions. Derivative transactions include financial (e.g., forwards, futures, swaps and options) and non-financial (e.g., precious metal and commodities) derivatives.

Wrong-way risk is the risk that exposure to a counterparty is adversely correlated with the credit quality of that counterparty. There are two types of wrong-way risk: (i) Specific wrong-way risk, which exists when the Issuer's exposure to a particular counterparty is positively correlated with the probability of default of the counterparty due to the nature of the Issuer's transactions with them (e.g., loan collateralized by shares or debt issued by the counterparty or a related party); and (ii) General wrong-way risk, which exists when there is a positive correlation between the probability of default of counterparties and general macroeconomic or market factors. This typically occurs with derivatives (e.g., the size of the exposure increases) or with collateralized transactions (the value of the collateral declines).

Geographically, as at October 31, 2018, Canada represented approximately 47% of the Issuer's gross credit risk exposure while the United States represented 30%, Europe 14% and the other international regions 9%. Accordingly, deterioration in general business and economic conditions in Canada and the United States could adversely affect the credit quality of the Issuer's borrowers and counterparties and could thus affect the value of the Issuer's assets and require an increase in loan impairment charges and provisions. Even though efforts are made to manage such risks diligently, there can be no assurances that these risks will not materialize.

(iii) Replacing the "Operational risk" section with the following:

Operational risk is the risk of loss or harm to the Issuer resulting from people, inadequate or failed internal processes and systems or from external events. Operational risk is inherent in all of the Issuer's activities, including the practices and controls used to manage other risks. Failure to manage operational risk can result in direct or indirect financial loss, reputational impact, regulatory censure, or failure in the management of other risks such as credit or market risk.

Notwithstanding anything in this risk factor, this risk factor should not be taken as implying that the Issuer will be unable to comply with its obligations as a company with securities admitted to the Official List of the United Kingdom Listing Authority or as a supervised firm regulated by the UK Listing Authority or PRA.

The Issuer's operations expose it to many different operational risks, which may adversely affect its businesses and financial results. The following table is not exhaustive, as other factors could also adversely affect the Issuer's results.

Risk	Description
Information Technology and Cyber Risks	As the Issuer continues to digitize its business operations, IT and cyber risks are present in the use, ownership, operation, involvement and adoption of IT within the Issuer's organization. As described in the Top and emerging risk section, the impact of a cyber-attack could be significant to the Issuer's businesses and clients.
Third Party Risk	Third party risk continues to receive attention as the Issuer increasingly engages third parties to augment its operational capabilities. Failure to effectively onboard and manage the Issuer's service providers may expose the Issuer to service disruption, financial loss, and other risks.

Money Laundering Risk	The Issuer has an enterprise-wide program to deter, detect and report suspected money laundering and terrorist financing activities. Failure to do so could result in enforcement actions, legal actions and reputational damage.
Privacy Risk	Privacy risk relates to the improper use of personal information or failing to safeguard confidential client, employee or the Issuer's own proprietary information. The Issuer is dedicated to protecting the personal information entrusted to the organization. That commitment is fundamental to the way the Issuer does business and is reflected in the Issuer's privacy policies and enterprise-wide training; keeping privacy measures top of mind to ensure personal information is protected across all business processes from the outset.
Climate Change	Climate change continues to impact the frequency and intensity of weather-related events. Although the Issuer has not had a significant adverse impact from weather-related events through the course of the year, it has a Business Continuity Management program in place to ensure resiliency in the event of extreme weather to ensure client and business impacts are minimal.

(iv) Replacing the “Legal and regulatory environment risk” section with the following:

Legal and regulatory environment risk is the risk that new or modified laws and regulations, and the interpretation or application of those laws and regulations, will negatively impact the way in which the Issuer operates, both in Canada and abroad. The full impact of some of these changes on the Issuer's business will not be known until final rules are implemented and market practices have developed in response. The following provides a high-level summary of some of the key regulatory changes that have potential to increase the Issuer's costs, impact the Issuer's profitability, and increase the complexity of the Issuer's operations.

Global Trade Agreements

Global trade tensions remain elevated, with both positive and negative developments in recent months. The United States, Mexico, and Canada successfully concluded trade talks at the beginning of October 2018. The proposed new agreement, the United States-Mexico-Canada Agreement, will keep the dispute resolution provision, prevent tariffs in the auto sector, and reduce uncertainty regarding future trading relations within North America; however, certain concessions (such as in the dairy industry) were made and tariffs on steel and aluminum remain in effect. At the same time, tensions between the United States and China escalated with additional tariffs being implemented and limited progress toward a negotiated solution. In its semi-annual forecast update, the International Monetary Fund noted that trade tensions were partly responsible for the downgrade of global growth projections for 2018 and 2019.

Consumer Protection

The Canadian federal government has focused attention on issues relating to consumer protection. For example, Canadian regulatory agencies undertook reviews of sales practices at Canadian banks. On March 20, 2018, the Financial Consumer Agency of Canada (FCAC) released a report on its review of sales practices. On September 13, 2018, the Issuer received a supervisory letter from FCAC which detailed the FCAC's recommendations and observations arising out of the domestic retail sales practices review they conducted on the Issuer. While no widespread misconduct was identified, several areas for improvement were noted. On October 29, 2018 the federal government tabled proposed legislative changes to the consumer protection provisions applicable to banks, including enhancements in areas like corporate governance, business conduct, disclosure and transparency, and new powers for the FCAC.

Privacy

Legislative developments in data privacy are being closely monitored following the enactment of GDPR. California was the first state to enact post-GDPR legislation (effective January 2020), articulating specific individual rights and requirements in connection with the sale of data. In Canada, mandatory breach reporting began on November 1, 2018, and the Privacy Commissioner of Canada (the Commissioner) has called for modernization of legislation given the pace of technological change, including the ability for the Commissioner to audit businesses and levy fines. As European privacy laws are further enhanced to align with the GDPR, legislative and regulatory developments are expected to accelerate around the world.

Canadian Housing Market and Consumer Debt

The Government of Canada and a number of provinces have introduced measures to respond to concerns relating to the level and sustainability of Canadian household debt. Risks in this area continue to be closely monitored with further regulatory responses possible depending on market conditions and any heightened concerns that may be raised.

Payments Issues

The federal government is engaged in several initiatives that could have an impact on the payments system in Canada. This includes the following: amendments to the Canadian Payments Act concerning governance of Payments Canada and access considerations; the development of a regulatory oversight framework for the retail payments system; and initiatives under consideration to modernize the payments system.

London Interbank Offered Rate (LIBOR)

LIBOR is the most widely referenced interest benchmark rate across the globe for derivatives, bonds, loans and other floating rate instruments; however, there is a regulator-led push to transition the market from LIBOR to alternative risk-free, or nearly risk-free, rates that are based on actual overnight transactions. The main accelerator for the change has been the United Kingdom Financial Conduct Authority's statement last year that after 2021, the UK Listing Authority will no longer persuade or compel panel banks to make the submissions required to calculate LIBOR. As a result, United Kingdom and United States regulators have warned the industry they will need to be prepared for LIBOR to be discontinued at the end of 2021. Derivatives, floating rate notes and other financial contracts whose terms extend beyond 2021, and that refer to LIBOR as the reference rate, will be impacted.

Other Regulatory Initiatives Impacting Financial Services in Canada

Several initiatives are underway or contemplated. From the perspective of the federal government this includes: a consultation process on the merits of open banking in a Canadian context; a consultation on the digital/data-driven economy; proposed changes to the regulatory framework for the anti-money laundering regime in Canada; and consultations on the details of its deposit insurance review. From a provincial perspective, the Canadian Securities Administrators are engaged in a consultation process on registration and business conduct rules relating to over-the-counter (OTC) derivatives products, including bank activities in this area.

United States Regulatory Initiatives

Policymakers are considering reforms to various United States regulations, certain of which may, if implemented, result in reduced complexity of the United States regulatory framework and lower compliance costs. These include possible reforms to the Volcker Rule; the U.S. Securities and Exchange Commission's proposed standards of conduct for brokers and advisors (i.e. Regulation Best Interest); the regulation of OTC derivatives; and key aspects of the capital, leverage, liquidity, and oversight framework in the United States

(e.g., enhanced prudential standards applicable to foreign bank organizations; the Federal Reserve's Comprehensive Capital Analysis and Review program; and total loss absorbing capacity rules). These initiatives may lead to financial regulatory reforms, the extent, timing, and impact of which are unknown at this time.

United States Tax Reform

In December 2017, the United States Tax Cuts and Jobs Act legislation (United States Tax Reform) was signed into law. Most provisions of the new law took effect at the beginning of calendar 2018 or for fiscal years starting in 2018. The tax law reduces individual and corporate rates and permits expensing of many capital expenditures. The law also eliminates deductions for Federal Deposit Insurance Corporation premiums and tightens deductibility rules for meals and entertainment, as well as certain legal settlement costs. In addition, a portion of executive salaries allocated to the United States would be non-deductible. Effective for fiscal years beginning after December 31, 2017, the law also established a Base Erosion Anti-Abuse Tax (BEAT) that may have an impact on cross-border related party payments. Regulations implementing and/or clarifying certain aspects of the legislation are being released on a rolling basis.

United Kingdom and European Regulatory Reform

The revised directive and regulation on Markets in Financial Instruments (MiFID II/MiFIR) became effective January 2018 with a significant technological and procedural impact for certain businesses operating in the EU. The reforms will introduce changes to pre- and post-trade transparency, market structure, trade and transaction reporting, algorithmic trading, and conduct of business. The United Kingdom remains in negotiations with regards to its exit from the EU, scheduled to take place on March 29, 2019. There is political agreement on a transition period which will extend until December 31, 2020; however, legal certainty on transition will only be provided on ratification of the Withdrawal Agreement which is currently under discussion. Until the date of its exit or, if there is a transition period, until the period expires, the United Kingdom will continue to remain an European Union Member State, subject to all European Union legislation. Other forthcoming regulatory initiatives include: the extension of the Senior Managers Regime to all United Kingdom regulated firms which is effective December 2019; transaction reporting of securities financing transactions which is expected to take effect in the first calendar quarter of 2019; and the implementation of new settlement disciplines, including mandatory buy-ins, for participants in European Central Securities Depositories which is effective September 2020.

PROGRAMME RATINGS

Following the provision of short-term debt ratings by both Moody's Canada and S&P Canada, the section entitled "**CREDIT RATINGS**" on pages iii to iv of the Notes Base Prospectus is deleted and replaced with the following:

"CREDIT RATINGS

The Senior Notes to be issued under the Programme pursuant to the Base Prospectus have been rated Aa2 (legacy long-term senior debt)¹, A2 (long-term senior debt)² and P-1 (short-term debt) by Moody's Canada Inc. ("**Moody's Canada**") and AA- (legacy long-term senior debt)¹, A (long-term senior debt)² and A-1+ (short-term debt) by S&P Global Ratings, acting through S&P Global Ratings Canada, a business unit of S&P Global Canada Corp. ("**S&P Canada**"). The Subordinated Notes to be issued under the Programme have been rated Baa1 by Moody's Canada and A- by S&P Canada.

In addition to the Programme ratings provided by Moody's Canada and S&P Canada, each of Moody's Investors Service, Inc. ("**Moody's USA**"), Standard & Poor's Financial Services LLC ("**S&P USA**"), Fitch

¹ Includes senior debt issued under the Programme which is excluded from the bank recapitalization "bail-in" regime.

² Subject to conversion under the bank recapitalization "bail-in" regime.

Ratings, Inc. (“**Fitch**”) and DBRS Limited (“**DBRS**”) has provided issuer and other ratings and assessments for the Issuer as set out in the table at paragraph 12 of “*General Information and Recent Developments*”.

In accordance with Article 4.1 of the Regulation (EC) No. 1060/2009, as amended (the “**CRA Regulation**”), please note that the following documents (as defined in the section entitled “Documents Incorporated by Reference”) incorporated by reference in this Base Prospectus contain references to credit ratings from the same rating agencies as well as Kroll Bond Rating Agency (“**KBRA**”), which provided an unsolicited rating:

- (a) the 2018 AIF (pages 13, 14 and 28 to 30); and
- (b) the 2018 Annual Report (page 78).

None of S&P Canada, S&P USA, Moody’s Canada, Moody’s USA, Fitch or DBRS (together, the “**non-EU CRAs**”) is established or regulated in the European Union or certified under the CRA Regulation. However, S&P Global Ratings Europe Limited, Moody’s Investors Service Ltd., DBRS Ratings Limited and Fitch Ratings Ltd., which are affiliates of S&P Canada, S&P USA, Moody’s Canada, Moody’s USA, Fitch and DBRS, respectively, and which are established in the European Union and registered under the CRA Regulation have endorsed the ratings of their affiliated non-EU CRAs. KBRA is certified under the CRA Regulation.

Notes issued under the Base Prospectus may be rated or unrated. The rating of a Tranche of Notes to be issued under the Base Prospectus may be specified in the applicable Final Terms. Where a Tranche of Notes is rated, such credit rating will not necessarily be the same as the ratings assigned to the Programme, the Issuer or to notes already issued.

The European Securities and Markets Authority (“**ESMA**”) is obliged to maintain on its website, www.esma.europa.eu, a list of credit rating agencies registered and certified in accordance with the CRA Regulation. This list must be updated within five working days of ESMA's adoption of any decision to withdraw the registration of a credit rating agency under the CRA Regulation. Therefore, such list is not conclusive evidence of the status of the relevant rating agency as there may be delays between certain supervisory measures being taken against a relevant rating agency and the publication of the updated ESMA list.

In general, European regulated investors are restricted under the CRA Regulation from using credit ratings for regulatory purposes, unless such credit ratings are issued by a credit rating agency established in the European Union and registered under the CRA Regulation (and such registration has not been withdrawn or suspended, subject to transitional provisions that apply in certain circumstances). Such general restriction will also apply in the case of credit ratings issued by non-EU credit rating agencies, unless the relevant credit ratings are endorsed by an EU-registered credit rating agency or the relevant non-EU credit rating agency is certified in accordance with the CRA Regulation (and such endorsement action or certification, as the case may be, has not been withdrawn or suspended, subject to transitional provisions that apply in certain circumstances).

A security rating is not a recommendation to buy, sell or hold securities and may be subject to suspension, revision or withdrawal at any time by the assigning agency and each rating should be evaluated independently of any other. Investors may suffer losses if the credit rating assigned to the Notes does not reflect the then creditworthiness of such Notes.”

AMENDMENT TO STATEMENT REGARDING GOVERNMENTAL, LEGAL OR ARBITRATION PROCEEDINGS

Paragraph 3 of the section entitled “General Information and Recent Developments” on page 162 of the Base Prospectus is hereby deleted in its entirety and replaced with the following:

“Other than the matters disclosed under the subsection entitled “Tax examinations and assessments” in Note 22 of the Issuer’s 2018 Audited Consolidated Financial Statements set out on page 198 of the Issuer’s 2018 Annual Report, and the matters disclosed (with the exception of the subsection entitled “Other matters”) in Note 25 of the 2018 Audited Consolidated Financial Statements set out on pages 202 and 203 of the Issuer’s 2018 Annual Report and in each case incorporated by reference herein, there are no, nor have there been any governmental, legal or arbitration proceedings (including any such proceedings which are pending or threatened of which the Issuer is aware) which may have, or have had during the twelve months prior to the date of this document, individually or in the aggregate, a significant effect on the financial position or profitability of the Issuer or of the Issuer and its subsidiaries taken as a whole”.

UPDATES TO THE SUMMARY TO THE PROGRAMME

The Summary to the Programme included in the Base Prospectus is made up of disclosure requirements known as “Elements”. These Elements are numbered in Sections A to E (A.1 – E.7).

Following the release of RBC’s 2018 Annual Report, Element B.4b of the Summary to the Programme is updated as set out below:

B.4b	Known trends affecting the Issuer and its Industry:	<p>The banking environment and markets in which the Issuer conducts its businesses will continue to be strongly influenced by developments in the Canadian, the United States and European economies and global capital markets.</p> <p>As with other financial services providers, the Issuer continues to face increased supervision and regulation in most of the jurisdictions in which it operates, particularly in the areas of continuing changes to global and domestic standards for capital and liquidity, global trade agreements, legislative developments on data privacy, the transition from the London Interbank Offered Rate (LIBOR) to alternative “risk-free” rates, and the United States, the United Kingdom and European regulatory reform.</p>
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Following the release of RBC’s 2018 Annual Report, Element B.12 of the Summary to the Programme is updated as set out below:

B.12	Key Historical Financial Information; no material adverse change and no significant change statements:	<p>With the exception of the figures for return on common equity, information in the tables below for the years ended October 31, 2018 and 2017 have been extracted from the Issuer’s 2018 audited consolidated financial statements, which have been prepared in accordance with International Financial Reporting Standards as issued by the International Accounting Standards Board and are incorporated by reference in the Base Prospectus. The amounts under return on common equity for the years ended</p>
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October 31, 2018 and 2017 have been extracted from the Issuer's 2018 Management's Discussion and Analysis:

Selected Consolidated Balance Sheet Information

	As at October 31, 2018	As at October 31, 2017
	<i>(in millions of Canadian dollars)</i>	
Loans, net of allowance for loan losses	576,818	542,617
Total assets	1,334,734	1,212,853
Deposits	837,046	789,635
Other liabilities	407,234	338,309
Subordinated debentures	9,131	9,265
Non-controlling interest	94	599
Equity attributable to shareholders	79,861	73,829

Condensed Consolidated Statement of Income Information

	Year ended October 31, 2018	Year ended October 31, 2017
	<i>(in millions of Canadian dollars, except per share amounts and percentage amounts)</i>	
Net interest income	18,191	17,140
Non-interest income	24,385	23,529
Total revenue	42,576	40,669
Provision for credit losses (PCL) ¹	1,307	1,150
Insurance policyholder benefits, claims and acquisition expense	2,676	3,053
Non-interest expense	22,833	21,794
Net Income	12,431	11,469
Earnings per share		
– basic	\$8.39	\$7.59
– diluted	\$8.36	\$7.56
Return on common equity (ROE) ^{2,3}	17.6%	17.0%

1. Under IFRS 9 *Financial Instruments* ("IFRS 9"), PCL relates primarily to loans, acceptances, and commitments, and also applies to all financial assets except for those classified or designated as fair value through profit or loss (FVTPL) and equity securities designated as fair value through other comprehensive income (FVOCI). Prior to the adoption of IFRS 9, PCL related only to loans, acceptances, and commitments. PCL on loans, acceptances, and commitments is comprised of PCL on impaired loans (Stage 3 PCL under IFRS 9 and PCL on impaired loans under IAS 39) and PCL on performing loans (Stage 1 and Stage 2 PCL under IFRS 9 and PCL on loans not yet identified as impaired under IAS 39). Refer to the Credit risk section of the 2018 Management's Discussion and Analysis and Note 2 of the Issuer's 2018 Audited Consolidated Financial Statements in the Issuer's 2018 Annual Report for further details.

2. This measure may not have a standardized meaning under generally accepted accounting principles (GAAP) and may not be comparable to similar measures disclosed by other financial institutions. For further details, refer to the Key performance and non-GAAP measures section of the 2018 Management's Discussion and Analysis in the Issuer's 2018 Annual Report.

3. Average amounts are calculated using methods intended to approximate the average of the daily balances for the period. This includes Average common equity used in the calculation of ROE. For further details, refer to the Key performance and non-GAAP measures section of the 2018 Management's Discussion and Analysis in the Issuer's 2018 Annual Report.

		<p>Statement of no significant or material adverse change</p> <p>Since October 31, 2018, there has been no material adverse change in the prospects of the Issuer and its subsidiaries taken as a whole.</p> <p>Since October 31, 2018, there has been no significant change in the financial or trading position of the Issuer and its subsidiaries taken as a whole.</p>
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Element B.17 of the Summary to the Programme, in respect of the addition of short-term debt ratings for Notes by each of Moody's Canada and S&P Canada, is updated as set out below:

B.17	Credit Ratings Assigned to the Issuer or its Debt Securities at the Request of or in Cooperation with the Issuer:	<p>The credit ratings assigned to the Issuer are:</p> <p>(i) Aa2 (legacy long-term senior debt)¹, A2 (long-term senior debt)², P-1 (short-term debt), Baa1 (subordinated debt), Baa1 (NVCC subordinated debt)³, Baa3 (preferred shares and NVCC preferred shares)³, each with a stable outlook, by Moody's Investors Services, Inc. ("Moody's USA"),</p> <p>(ii) AA- (legacy long-term senior debt)¹, A (long-term senior debt)², A-1+ (short-term debt), A (subordinated debt), A- (NVCC subordinated debt)³, BBB+ (preferred shares) and BBB/P-2⁴ (NVCC preferred shares)³, each with a stable outlook, by Standard & Poor's Financial Services LLC ("S&P USA");</p> <p>(iii) AA (legacy long-term senior debt)¹, AA (long-term senior debt)², F1+ (short-term debt), AA- (subordinated debt) and AA- (NVCC subordinated debt)³, each with a stable outlook, by Fitch Ratings, Inc. ("Fitch USA"); and</p> <p>(iv) AA (legacy long-term senior debt)¹, AA (low) (long-term senior debt)², R-1 (high) (short-term debt), A (high) (subordinated debt), A (low) (NVCC subordinated debt)³, Pfd-2 (high) (preferred shares) and Pfd-2 (NVCC preferred shares)³, each with a positive outlook, by DBRS Limited ("DBRS").</p> <p>The Senior Notes issuable under the Programme have been generally rated Aa2 (legacy long-term senior debt)⁵, A2 (long-term senior debt)² and P-1 (short-term debt) by Moody's Canada Inc. ("Moody's Canada") and AA- (legacy long-term senior debt)⁵, A (long-term senior debt)² and A-1+ (short-term debt) by S&P Global Ratings, acting through S&P Global Ratings Canada, a business unit of S&P Global Canada Corp. ("S&P Canada").</p> <p><small>1 Includes (a) Senior debt issued prior to September 23, 2018; and (b) Senior debt issued on or after September 23, 2018 which is excluded from the bank recapitalization "bail-in" regime.</small></p>
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		<p>2 Subject to conversion under the bank recapitalization "bail-in" regime.</p> <p>3 Non-Viability contingent capital or NVCC.</p> <p>4 It is the practice of S&P USA to present an issuer's preferred shares on both the global rating scale and on the Canadian national scale when listing the ratings for a particular issuer.</p> <p>5 Includes Senior debt issued under the Programme which is excluded from the bank recapitalization "bail-in" regime.</p> <p><i>Issue specific summary</i></p> <p>[The Senior Notes to be issued [have been/are expected to be] rated [•] by [•]]</p> <p>[The Senior Notes to be issued have not been specifically rated.]</p>
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Following the amendment of certain risk factors, namely the Top and emerging risk, Credit risk, Operational risk, and Legal and regulatory environment risk factors, Element D.2 of the Summary to the Programme is updated as set out below:

D.2	Key Information on the key risks that are specific to the Issuer:	<p>The following is a summary of the key risks relating to the Issuer:</p> <p>Information Technology and Cyber Risks: Information technology (IT) and cyber risks remained as key risks, not only for the financial services sector, but for other industries worldwide. Due to the size, scale, and global nature of the Issuer's operations, the Issuer's heavy reliance on the internet to conduct day-to-day business activities, and the Issuer's evolving intricate technological infrastructure, the Issuer is subject to heightened risks in the form of cyber-attacks, data breaches, cyber extortion and similar compromises. The Issuer's use of third party service providers, which are also subject to these potential compromises, increases the Issuer's risk of a potential attack, breach or disruption as the Issuer has less immediate oversight over their IT domain. Additionally, clients' use of personal devices can create further avenues for potential cyber-related incidents as the Issuer has little or no control over the safety of these devices. As the volume and sophistication of cyber-attacks continues to increase, the resulting implications could include business interruptions, service disruptions, financial loss, theft of intellectual property and confidential information, litigation, enhanced regulatory attention and penalties, and reputational damage. Furthermore, the adoption of emerging technologies, such as cloud computing, artificial intelligence and robotics, call for continued focus and investment to manage the Issuer's risks effectively.</p> <p>Global Uncertainty: Global uncertainty remained a top risk throughout 2018. The United States administration continued to advocate for policy changes, particularly those related to trade which added to overall global uncertainty and volatility. The Canadian economy continues to face specific risks with respect to the evolving trade environment. Concerns also remain around the social, political and economic impacts of the changing political landscape in Europe, including the final outcome of</p>
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Brexit negotiations. In addition, there are growing concerns over an economic slowdown in emerging markets in light of capital outflows in favour of developed markets and expected interest rate increases. Broader geopolitical tensions remained high amongst the United States, Russia, China, and across the Middle East.

Canadian Housing and Household Indebtedness: While the Canadian economy continued to grow and low unemployment rates prevailed this fiscal year, the housing market remained a concern for the Canadian financial system, although at a diminishing level. Overall housing prices stayed elevated and affordability remained stretched. The measures implemented by the Canadian government and regulators over the past two years to help safeguard homebuyers and financial institutions alike did have the desired effect of cooling the market and returning balance to demand-supply conditions. Annual price gains decelerated to low single-digits in key markets, specifically across both the Greater Toronto Area and Greater Vancouver Area. However, as the Bank of Canada continues to be on a path of gradually raising interest rates, this could have materially negative credit implications for the Issuer's broader consumer lending activities in the future given current levels of elevated household indebtedness.

Regulatory Changes: The Issuer operates in multiple jurisdictions, and the continued introduction of new or revised regulations leads to increasing focus across the organization on meeting higher regulatory requirements across a number of different markets. Financial and other reforms coming on stream in multiple jurisdictions continue to provide challenges and impact the Issuer's operations and strategies.

Credit risk: Credit risk is the risk of loss associated with an obligor's potential inability or unwillingness to fulfill its contractual obligations on a timely basis. Credit risk may arise directly from the risk of default of a primary obligor of the Issuer (e.g., issuer, debtor, counterparty, borrower or policyholder), indirectly from a secondary obligor of the Issuer (e.g., guarantor or reinsurer), through off-balance sheet exposures, contingent credit risk and/or transactional risk. Credit risk includes counterparty credit risk from both trading and non-trading activities. The failure to effectively manage credit risk across all the Issuer's products, services and activities can have a direct immediate and material impact on the Issuer's earnings and reputation.

Market risk: Market risk is defined to be the impact of market prices upon the financial condition of the Issuer. This includes potential gains or losses due to changes in market determined variables such as interest rates, credit spreads, equity prices, commodity prices, foreign exchange rates and implied volatilities.

		<p>Liquidity and funding risk: Liquidity and funding risk is the risk that the Issuer may be unable to generate sufficient cash or its equivalents in a timely and cost-effective manner to meet its commitments as they come due (including the Securities). Liquidity risk arises from mismatches in the timing and value of on-balance sheet and off-balance sheet cash flows. Core funding, comprising capital, longer-term wholesale liabilities and a diversified pool of personal and, to a lesser extent, commercial and institutional deposits, is the foundation of the Issuer's structural liquidity position. The Issuer's ability to access unsecured funding markets and to engage in certain collateralised business activities on a cost-effective basis are primarily dependent upon maintaining competitive credit ratings. Credit ratings and outlooks provided by rating agencies reflect their views and methodologies. Ratings are subject to change, based on a number of factors including, but not limited to, the Issuer's financial strength, competitive position, liquidity and other factors not completely within the Issuer's control. A lowering of the Issuer's credit ratings may have potentially adverse consequences for the Issuer's funding capacity or access to the capital markets, may affect the Issuer's ability, and the cost, to enter into normal course derivative or hedging transactions and may require the Issuer to post additional collateral under certain contracts, any of which may have an adverse effect on its results of operations and financial condition.</p>
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SUPPLEMENTARY OFFERING CIRCULAR

Pages 17 to 18 inclusive of this Supplement (the “**1st Supplementary Offering Circular**”) constitutes a supplement to the Offering Circular and is prepared in connection with the Programme for the Issuance of Securities established by RBC.

Terms defined in the Offering Circular have the same meaning when used in this 1st Supplementary Offering Circular. The 1st Supplementary Offering Circular is supplemental to, and shall be read in conjunction with, the Offering Circular and any other prior supplements to the Offering Circular issued by RBC (together, the “**Offering Circular**”).

NEITHER THE OFFERING CIRCULAR NOR THIS 1ST SUPPLEMENTARY OFFERING CIRCULAR TO THE OFFERING CIRCULAR HAVE BEEN REVIEWED OR APPROVED BY THE UK LISTING AUTHORITY AND THE OFFERING CIRCULAR DOES NOT CONSTITUTE A PROSPECTUS FOR THE PURPOSE OF DIRECTIVE 2003/71/EC AS AMENDED OR SUPERSEDED.

RBC accepts responsibility for the information in this 1st Supplementary Offering Circular. To the best of the knowledge of RBC, having taken reasonable care to ensure that such is the case, the information contained in this 1st Supplementary Offering Circular is in accordance with the facts and does not omit anything likely to affect the import of such information.

This 1st Supplementary Offering Circular is supplemental to, and should be read in conjunction with, the Offering Circular and the documents incorporated by reference therein. This 1st Supplementary Offering Circular is to be read in conjunction with the following sections of the 1st Supplementary Prospectus (as amended herein):

- (i) Documents Incorporated by Reference;
- (ii) Statement of No Significant Change;
- (iii) Statement of No Material Adverse Change;
- (iv) Risk Factors;
- (v) Programme Ratings; and
- (vii) Amendment to Statement Regarding Governmental, Legal or Arbitration Proceedings;

each of which will be deemed to be incorporated by reference herein, save that references to “**Base Prospectus**” shall be deemed to be to the “**Offering Circular**”, references to “**1st Supplementary Prospectus**” shall be deemed to be to the “**1st Supplementary Offering Circular**” and, references to “**Notes**” shall be deemed to be reference to “**Non PD Notes**”.

To the extent that there is any inconsistency between (a) any statement in this 1st Supplementary Offering Circular or any statement incorporated by reference into the Offering Circular by this 1st Supplementary Offering Circular and (b) any other statement in, or incorporated by reference in, the Offering Circular, the statements in (a) above will prevail.

Save as disclosed in this 1st Supplementary Offering Circular, no significant new factor, material mistake or inaccuracy relating to the information included in the Offering Circular which is capable of affecting the assessment of Non PD Notes issued under the Programme has arisen or been noted, as the case may be, since the publication of the Offering Circular.