Dated July 21, 2020

ROYAL BANK OF CANADA

(a Canadian chartered bank)

REGISTRATION DOCUMENT

INTRODUCTION

What is this document?

According to Article 8(6) of Regulation (EU) 2017/1129 (the "**Prospectus Regulation**"), a prospectus may be drawn up as a single document or separate documents. A prospectus composed of separate documents shall divide the required information into a registration document, a securities note and a summary note. This document constitutes a registration document ("**Registration Document**") prepared in accordance with Article 6 of the Commission Delegated Regulation (EU) 2019/980 of 14 March 2019 relating to wholesale non-equity securities for the purpose of giving information with respect to Royal Bank of Canada (the "**Bank**" or the "**Issuer**") and its subsidiaries (together with the Bank, the "**RBC Group**"). The Registration Document contains information describing the Bank's business activities as well as certain financial information and material risks faced by it which, according to the particular nature of the Bank and the debt or derivative securities which it may offer to the public or apply to have admitted to trading on a regulated market during the period of twelve months after the date hereof, is necessary to enable investors to make an informed assessment of the assets and liabilities, financial position, profit and losses and prospects of the Bank. Some of the information is incorporated by reference into the Registration Document.

Information on any debt or derivative securities issued by the Bank may be found in a separate securities note containing disclosure on such debt or derivative securities (and, where appropriate, in the relevant summary note applicable to the relevant debt or derivative securities) which, together with this Registration Document, constitutes a prospectus issued in compliance with Article 8(6) of the Prospectus Regulation.

How do I use this Registration Document?

You should read and understand fully the contents of this Registration Document, including any documents incorporated by reference. This Registration Document contains important information about the Issuer, as well as describing certain risks relating to the Issuer and its business. An overview of the various sections comprising this Registration Document is set out below.

- The *Caution Regarding Forward-Looking Statements* section sets out considerations that should be taken into account when reading any statement relating to future events and circumstances.

- A *Table of Contents* section, with corresponding page references, is set out on page vi.

- The *Risk Factors* section describes the principal material risks that the Issuer believes could affect its results of operations or financial conditions and its ability to satisfy its obligations under any debt or derivative securities issued by it.

- The *Documents Incorporated by Reference* section sets out the information that is incorporated by reference into, and forms part of, this Registration Document. This Registration Document should be read together with all information which is deemed to be incorporated into the Registration Document by reference.

- The *Description of Royal Bank of Canada* section provides certain information about the Bank, including its history and development, principal activities and markets, principal markets in which it competes, organisational structure, Issuer ratings, summary financial information, directors, major shareholders and material contracts.

- The *General Information* section sets out further information on the Issuer which the Issuer is required to include under applicable rules. These include the availability of certain relevant documents for inspection and confirmations from the Bank.

Responsibility for the information contained in this Registration Document

The Bank accepts responsibility for the information in this Registration Document. To the best of the knowledge of the Bank, the information contained in the Registration Document is in accordance with the facts and the Registration Document makes no omission likely to affect its import.

This Registration Document has been approved by, the Financial Conduct Authority (the "**FCA**"), as competent authority under the Prospectus Regulation. The FCA only approves this Registration Document as meeting the standards of completeness, comprehensibility and consistency imposed by the Prospectus Regulation, and such approval should not be considered as an endorsement of the Issuer that is the subject of this Registration Document. This Registration Document will be valid for 12 months following the date of approval and will expire on July 21, 2021. The obligation to supplement this Registration Document in the event of significant new factors, material mistakes or material inaccuracies does not apply once the Registration Document is no longer valid.

Credit Rating Agency Regulation notice

Each of Moody's Investors Service, Inc. ("**Moody's USA**"), Standard & Poor's Financial Services LLC ("**S&P USA**"), Fitch Ratings, Inc. ("**Fitch**") and DBRS Limited ("**DBRS**") has provided issuer ratings for the Issuer as specified under "*Description of Royal Bank of Canada – Issuer Ratings*".

In accordance with Article 4.1 of the Regulation (EC) No. 1060/2009, as amended by Regulation (EU) No. 513/2011 (the "**CRA Regulation**"), please note that the following documents (as defined in the section entitled "Documents Incorporated by Reference") incorporated by reference in this Registration Document 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 2019 AIF (pages 13, 14, 28, 29 and 30);

(b) the 2019 Annual Report (page 77); and

(c) the Second Quarter 2020 Report to Shareholders (page 42).

None of S&P USA, Moody's USA, Fitch, DBRS or KBRA (collectively, the "**non-EU CRAs**") is established in the European Union or the United Kingdom or certified under the CRA Regulation. However, S&P Global Ratings Europe Limited, Moody's Investors Service Ltd., DBRS Ratings Limited and Fitch Ratings Limited, which are affiliates of S&P USA, Moody's USA, DBRS and Fitch, respectively, and which are established in the European Union or the United Kingdom and registered under the CRA Regulation have endorsed the ratings of their affiliated non-EU CRAs. KBRA is certified under the CRA Regulation. See "*Description of Royal Bank of Canada – Issuer Ratings*".

Use of certain defined terms in this Registration Document

All references in this Registration Document to "**$**", "**C$**" or "**Canadian dollars**" are to the lawful currency of Canada. In this Registration Document, the term "**PRA**" shall mean the Prudential Regulation Authority.

CAUTION REGARDING FORWARD-LOOKING STATEMENTS

From time to time, the Issuer makes written or oral forward-looking statements within the meaning of certain securities laws, including the “safe harbour” provisions of the *United States Private Securities Litigation Reform Act of 1995* and any applicable Canadian securities legislation. The Issuer may make forward-looking statements in this Registration Document and in the documents incorporated by reference herein, in other filings with Canadian regulators, the United States Securities and Exchange Commission or other securities regulators or, in reports to shareholders and in other communications, including statements by the Issuer’s President and Chief Executive Officer. The forward-looking statements contained in this Registration Document and in the documents incorporated by reference herein include, but are not limited to, statements relating to the Issuer’s financial performance objectives, vision and strategic goals, the Economic, market and regulatory review and outlook for Canadian, U.S., European and global economies, the regulatory environment in which the Issuer operates, the Strategic priorities and Outlook sections for each of the Issuer’s business segments, and the risk environment including the Issuer’s liquidity and funding risk, and the potential continued impacts of the coronavirus (COVID-19) pandemic on the Issuer’s business operations, financial results and financial condition and on the global economy and financial market conditions. The forward-looking information contained in this Registration Document is presented for the purpose of assisting the holders and potential purchasers of the debt or derivative securities issued by the Issuer and financial analysts in understanding the Issuer’s financial position and results of operations as at and for the periods ended on the dates presented as well as the Issuer’s financial performance objectives, vision and strategic goals, and may not be appropriate for other purposes. Forward-looking statements are typically identified by words such as “believe”, “expect”, “foresee”, “forecast”, “anticipate”, “intend”, “estimate”, “goal”, “plan” and “project” and similar expressions of future or conditional verbs such as “will”, “may”, “should”, “could” or “would”.

By their very nature, forward-looking statements require the Issuer to make assumptions and are subject to inherent risks and uncertainties, which give rise to the possibility that the Issuer’s predictions, forecasts, projections, expectations or conclusions will not prove to be accurate, that the Issuer’s assumptions may not be correct and that the Issuer’s financial performance objectives, vision and strategic goals will not be achieved. Readers are cautioned not to place undue reliance on these statements as a number of risk factors could cause the Issuer’s actual results to differ materially from the expectations expressed in such forward-looking statements. These factors – many of which are beyond the Issuer’s control and the effects of which can be difficult to predict – include: credit, market, liquidity and funding, insurance, operational, regulatory compliance, strategic, reputation, legal and regulatory environment, competitive and systemic risks and other risks discussed in the risk sections of the Issuer’s 2019 MD&A (as defined in the section entitled “Documents Incorporated by Reference”) contained in the Issuer’s 2019 Annual Report (and incorporated by reference herein) and in the “Risk management” and “Significant developments: COVID-19” sections of the Issuer’s Second Quarter 2020 MD&A (as defined in the section entitled “Documents Incorporated by Reference”) contained in the Issuer’s Second Quarter 2020 Report to Shareholders (and incorporated by reference herein); including information technology and cyber risk, privacy, data and third-party related risks, geopolitical uncertainty, Canadian housing and household indebtedness, regulatory changes, digital disruption and innovation, climate change, the business and economic conditions in the geographic regions in which the Issuer operates, the effects of changes in government fiscal, monetary and other policies, tax risk and transparency, environmental and social risk and the emergence of widespread health emergencies or public health crises such as pandemics and epidemics, including the COVID-19 pandemic and its impact on the global economy and financial market conditions and the Issuer's business operations, financial results and financial condition.

The Issuer cautions that the foregoing list of risk factors is not exhaustive and other factors could also adversely affect the Issuer's results. When relying on the Issuer's forward-looking statements to make decisions with respect to the Issuer, investors and others should carefully consider the foregoing factors and other uncertainties and potential events. Material economic assumptions underlying the forward-looking statements contained in this Registration Document and in the documents incorporated by reference herein are set out in the "Economic, market and regulatory review and outlook" section and for each business segment under the "Strategic priorities" and "Outlook" headings of the Issuer's 2019 MD&A contained in its 2019 Annual Report, as updated by the "Economic, market and regulatory review and outlook" and "Significant developments: COVID-19" sections of the Issuer's Second Quarter 2020 MD&A contained in its Second Quarter 2020 Report to Shareholders, which sections are incorporated by reference herein. Except as required by law, none of the Issuer, any dealer appointed in relation to any issue of debt or derivative securities by the Issuer or any other person undertakes to update any forward-looking statement, whether written or oral, that may be made from time to time by or on behalf of the Issuer.

Additional information about these and other factors can be found in the risk sections of the Issuer's 2019 MD&A contained in its 2019 Annual Report and the Risk management and Significant developments: COVID 19 sections of the Issuer's Second Quarter 2020 MD&A contained in its Second Quarter 2020 Report to Shareholders, which sections are incorporated by reference herein.

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RISK FACTORS

The Issuer believes that the following factors, which are specific to the Issuer, may affect its ability to fulfil its obligations under its non-equity securities. Most of these factors are contingencies which may or may not occur.

The Issuer believes that the factors described below represent the material risks inherent in investing in non-equity securities issued by it at the date of this Registration Document. If any or a combination of these risks actually occurs, the business, results of operation, financial condition and/or prospects of the Issuer could be materially and adversely affected, which could result in the Issuer being unable to pay interest, principal or other amounts on or in connection with any non-equity securities issued by it or materially and adversely affect the trading price of any such non-equity securities.

Prospective investors should note that the risks relating to the Issuer summarised in this section are risks that the Issuer believes to be essential to an assessment by the prospective investor of whether to make an investment in the non-equity securities and the Issuer does not represent that the statements below regarding the risks of investing in its non-equity securities are exhaustive. Additional risks and uncertainties not presently known to the Issuer or that it currently believes to be immaterial could also have a material impact on its results of operations or financial condition or affect the ability of the Issuer to pay interest, principal or other amounts on or in connection with the non-equity securities issued by it. As the risks which the Issuer faces relate to events and depend on circumstances that may or may not occur, prospective investors should also read the detailed information set out elsewhere in this document (including information incorporated by reference) and any applicable securities note (and, where appropriate, summary note), final terms or pricing supplement to reach their own views prior to making any investment decisions.

Risks relating to the Issuer

Prospective investors should consider the following risks to which the Issuer's businesses are exposed.

1. Top and emerging risks

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. These practices ensure a forward-looking risk assessment is maintained by management in the course of business development and as part of the execution of ongoing risk oversight responsibilities. Top and emerging risks are discussed by the Issuer's senior management and the Board on a regular basis.

The Issuer has developed separate definitions for Top Risks and Emerging Risks, as well as supplementary internal guidance, to support enterprise-wide identification and assessment of all material risks, including those that are not readily apparent.

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. 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 tables below set out the risk factors that the Issuer currently considers its top and emerging risks, respectively, but it should be highlighted that the risks set out in these tables are not exhaustive and investors should consider all the risk factors disclosed in the Risk Factors section.

Top Risks	**Description**
Information Technology and Cyber Risks	Information technology (IT) and cyber risks remain as top risks, not only for the financial services sector, but for other industries worldwide. The Issuer is subject to heightened cybersecurity risks which includes risks in the form of cyber-attacks, data breaches, cyber extortion and similar compromises, due to the size, scale, and global nature of the Issuer's operations, its heavy reliance on the internet to conduct day-to-day business activities, its intricate technological infrastructure and the Issuer's use of third party service providers. 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 continue 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 (AI) and robotics, call for continued focus and investment to manage the Issuer's risks effectively and if not managed effectively may have an adverse effect on the Issuer's financial performance and condition. Resulting implications from the cybersecurity risks described above could include business interruptions, service disruptions, financial loss, theft of intellectual property and confidential information, litigation, enhanced regulatory attention and penalties, and reputational damage.

Privacy, Data management and Third Party Related Risks	The management, use, and protection of data is a top risk given the high value attributed to data and the potential exposure to operational risks, reputational risks, and regulatory compliance risks. Ineffective or inconsistent data governance and management may compromise the privacy and integrity of the data the Issuer's manages which could have financial, reputational and regulatory compliance impacts for the Issuer. The use and management of data and the governance over data, are becoming increasingly important as the Issuer continues to invest in digital solutions, as well as, expanding its business activities. The growing importance of effective privacy and information management practices and controls has been demonstrated by the pace and size of recent regulatory enforcement and regulatory developments relating to privacy, such as the General Data Protection Regulation by the European Union (EU) and the California Consumer Privacy Act (CCPA). Further, as the Issuer continues to partner with third party service providers and adopt new technologies and business models (e.g., cloud computing), the Issuer's potential exposure to these risks increases. Failure to effectively onboard and manage service providers may expose the Issuer to service disruption, financial loss, and other risks that may negatively impact its financial performance and condition.
Geopolitical and Global Uncertainty	Significant uncertainty about the impacts of the COVID-19 pandemic, trade policy and geopolitical tensions continue to pose risks to the global economic outlook. In April 2020, the International Monetary Fund (IMF) projected global growth in calendar 2020 to fall to -3%; a baseline scenario which would mark the worst recession since the Great Depression and far worse than the global financial crisis of 2008. Uncertainty around the duration and intensity of the health and financial crisis could result in global GDP declining further if the pandemic does not recede this year, and even if the pandemic does recede there could be longer-term effects on economic growth and commercial activity. Estimates around the expected recovery beyond this fiscal year are equally uncertain, as the timelines for economic recovery are largely dependent on the duration of the pandemic, including the possibility of subsequent waves, and the effectiveness of the fiscal and monetary policy measures introduced in response.

	Trade policy also remains a source of uncertainty, as the Brexit transition period deadline of December 31, 2020 remains in place, despite delayed negotiations between the U.K. and the European Union (EU) and requests from the IMF to extend the transition. In March 2020, Canada ratified the Canada-United States-Mexico Agreement reducing lingering uncertainty about trade within North America, but the post-pandemic future of global trade policy remains uncertain as countries may look to decrease reliance on the global supply chain. Finally, global financial markets remain vulnerable to geopolitical tensions, such as those between Russia and the Organization of the Petroleum Exporting Countries (OPEC), which could result in increased market and commodity price volatility, and the uncertain future of the U.S.-China trade relationship. The Issuer's diversified business model, as well as its product and geographic diversification, continue to help mitigate the risks posed by global uncertainty. Nonetheless, global uncertainty and in particular its impact on the Canadian and US economies may still have an adverse impact on the Issuer's financial performance and condition.
Canadian Housing and Household Indebtedness	The Government of Canada, and a number of provincial governments, have introduced measures to respond to concerns related to housing affordability in certain markets and elevated levels of Canadian household debt. Lower mortgage rates, along with a solid labour market and strong population growth, helped spark a recovery in the Canadian housing market in 2019. The turnaround, however, has been slower in Western Canada due to the presence of additional cooling measures in British Columbia, coupled with more modest economic growth in Alberta and Saskatchewan. Low interest rates should help ease upward pressures on household debt service ratios but should interest rates begin to rise, this could have materially negative credit implications for the Issuer's broader consumer lending activities and adversely affect its financial performance and condition. As at April 30, 2020, the Issuer's retail credit risk exposure, which includes residential mortgages, home equity lines of credit, credit cards, unsecured lines of credit and overdraft protection products, was C$579,845 million reflecting exposures at default. 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. If this risk is not properly managed, it may have a negative impact on the Issuer's financial performance and condition and prospects.

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. See “Business segment results” on pages 21 to 42 of the 2019 MD&A incorporated by reference in the Registration Document for information on the Issuer’s business segments and the jurisdictions in which they operate. Financial and other reforms coming into effect, across multiple jurisdictions, such as the Canadian anti-money laundering regulations and Interest rate benchmark reform, continue to provide challenges and impact the Issuer’s operations and strategies and may negatively impact its financial performance and condition and prospects.

Emerging Risks	**Description**
Digital Disruption and Innovation	Demographic trends, evolving client expectations, the increased power to analyse data and the emergence of disruptors are creating competitive pressures across a number of sectors. Established technology companies, newer competitors, and regulatory changes continue to foster new business models that could challenge traditional banks and financial products. In addition, these trends and developments are eliciting re-energized efforts from traditional competitors to meet the evolving needs of clients and compete with non-traditional competitors. Finally, the adoption of new technologies, such as AI and machine learning, presents opportunities for the Issuer, but could result in new and complex risks that would need to be managed effectively and if not managed properly may adversely impact its financial performance and condition.
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 addition, climate change regulations, frameworks, and guidance are rapidly emerging and evolving across the globe. Increasing regulatory expectations create a new set of compliance risks that need to be managed. If not managed effectively, these could lead to negative reputational and financial impacts.

2. Transactional/Positional risks

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 and 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.

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 high net worth 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 lending-related and other credit risk and trading-related credit risk. Lending related and other credit risk 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) or amortized cost and deposits with financial institutions. Trading-related credit risk includes: Repo-style transactions, which include repurchase and reverse repurchase agreements and securities lending and borrowing transactions, and derivatives. The Issuer's gross credit exposure as at April 30, 2020 was C$1,549,968 million. See the table "Credit Risk exposure by portfolio, sector and geography" on page 26 of the Second Quarter 2020 MD&A incorporated by reference in the Registration Document for further information.

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 incorporates not only the contract's current value, but also considers how that value can move as market conditions change. Counterparty credit risk usually arises from trading-related derivative and repo-style transactions. Derivative transactions include forwards, futures, swaps and options, and can have underlying references that are either financial (e.g., interest rate, foreign exchange, credit or equity) or non-financial (e.g., precious metal and commodities). For more information on derivatives instruments and credit risk mitigation, see Note 8 of the 2019 Audited Consolidated Financial Statements incorporated by reference into the Registration Document.

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 (e.g., the value of the collateral declines).

Geographically, as at April 30, 2020, Canada represented approximately 64% of the Issuer's credit risk exposure while the United States represented 22%, Europe 10% and the other international regions 4%. 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 credit losses.

The Issuer has put in place specific frameworks to manage credit risk. See pages 57 to 58 of the 2019 MD&A incorporated by reference in the Registration for more information. Notwithstanding such frameworks, the Issuer has set aside provisions to absorb expected losses across its loans and other commitments. For example, for the year ended October 31, 2019, the Issuer's total provisions for credit losses (PCL) was C$1,864 million and for the three months ended April 30, 2020, the Issuer's total PCL was C$2,830 million[1]. See the table entitled "Provisions for credit losses" on page 63 of the 2019 MD&A and page 30 of the Second Quarter 2020 MD&A incorporated by reference in the Registration Document.

Failure to manage credit risk effectively may have an adverse impact on the Issuer's financial condition and performance.

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.

The measures of financial condition impacted by market risk are as follows:

1. Positions whose revaluation gains and losses are reported in Revenue, which includes:

   a) Changes in the fair value of instruments classified or designated as fair value through profit and loss ("**FVTPL**"), and

   b) Hedge ineffectiveness.

[1] The unprecedented challenges brought on by the COVID-19 pandemic in the second quarter of 2020 led to increased provision for credit losses of $2,830 million, up $2,404 million compared to same three-month period in 2019.

2. Common Equity Tier 1 (“**CET1**”) capital, which includes:

a) All of the above, plus

b) Changes in the fair value of FVOCI securities where revaluation gains and losses are reported as Other comprehensive income (OCI),

c) Changes in the Canadian dollar value of investments in foreign subsidiaries, net of hedges, due to foreign exchange translation, and

d) Changes in the fair value of employee benefit plan deficits.

3. CET1 ratio, which includes:

a) All of the above, plus

b) Changes in Risk-weighted Assets (“**RWA**”) resulting from changes in traded market risk factors, and

c) Changes in the Canadian dollar value of RWA due to foreign exchange translation.

4. The economic value of the Bank, which includes:

a) Points 1 and 2 above, plus

b) Changes in the economic value of other non-trading positions, net interest income, and fee based income, as a result of changes in market risk factors.

Market risks arise primarily through the Issuer’s trading activities but also though non-trading activities.

FVTPL positions

The market risk of trading portfolios is managed on a daily basis and is measured by two main probabilistic measures of potential loss: Value-at–risk (VaR) and Stressed Value-at-risk (SVaR).

VaR is a statistical measure of potential loss for a financial portfolio computed at a given level of confidence and over a defined holding period. The Issuer measures VaR at the 99th percentile confidence level for price movements over a one-day holding period using historic simulation of the last two years of equally weighted historic market data. These calculations are updated daily with current risk positions, with the exception of certain less material positions that are not actively traded and are updated on at least a monthly basis.

SVaR is calculated in an identical manner as VaR with the exception that it is computed using a fixed historical one-year period of extreme volatility and its inverse rather than the most recent two-year history. The stress period used is the interval from September 2008 through August 2009. SVaR is calculated daily for all portfolios, with the exception of certain less material positions that are not actively traded and are updated on at least a monthly basis.

See the table under “Market risk measures-FVTPL positions” on page 67 of the 2019 MD&A and on page 34 of the Second Quarter 2020 MD&A, both incorporated by reference in this Registration Document for the impact of market risk on FVPTL positions for 2019 and the three months ended April 30, 2020.

Structural Interest Rate risk

The interest rate risk arising from traditional banking products, such as deposits and loans, is referred to as Structural Interest Rate Risk (SIRR) and is subject to limits and controls. SIRR measures also include related hedges as well as the interest rate risk from securities held for liquidity management. Factors contributing to SIRR include the mismatch between asset and liability repricing dates, relative changes in asset and liability rates, and other product features that could affect the expected timing of cash flows, such as options to pre-pay loans or redeem term deposits prior to contractual maturity.

To monitor and control SIRR, the Issuer assesses two primary metrics, net interest income (NII) and economic value of equity (EVE). The table on page 69 of the 2019 MD&A shows the potential before-tax impact of an immediate and sustained 100 basis points and 200 basis points increase or decrease in interest rates on projected 12-month NII and EVE on the Issuer’s structural balance sheet assuming no subsequent hedging and the table on page 35 of the Second Quarter 2020 MD&A shows the potential before-tax impact of an immediate and sustained 100 bps increase or decrease in interest rates on the Issuer’s projected 12-month NII and EVE for our structural balance sheet, assuming no subsequent hedging. Rate floors are applied within the declining rates scenarios, with floor levels set based on rate changes experienced globally. Interest rate risk measures are based upon interest rate exposures at a specific time and continuously change as a result of business activities and management actions.

As at October 31, 2019, an immediate and sustained -100 bps shock would have had a negative impact to the Issuer’s NII of C$637 million. An immediate and sustained +100 bps shock at the end of October 31, 2019 would have had a negative impact to the Issuer’s EVE of C$1,356 million. As at April 30, 2020, an immediate and sustained -100 bps shock would have had a negative impact to the Issuer’s NII of C$726 million. An immediate and sustained +100 bps shock at the end of April 30, 2020 would have had a negative impact to the Issuer’s EVE of C$1,708 million.

Non-trading Foreign exchange rate risk

Foreign exchange rate risk is the potential adverse impact on earnings and economic value due to changes in foreign currency rates. The Issuer’s revenue, expenses and income denominated in currencies other than the Canadian dollar are subject to fluctuations as a result of changes in the value of the average Canadian dollar relative to the average value of those currencies. The Issuer’s most significant exposure is to the U.S. dollar, due to the Issuer’s operations in the U.S. and other activities conducted in U.S. dollars. Other significant exposures are to the British pound and the Euro, due to the Issuer’s activities conducted internationally in these currencies. A strengthening or weakening of the Canadian dollar compared to the U.S. dollar, British pound and the Euro could reduce or increase, as applicable, the translated value of the Issuer's foreign currency denominated revenue, expenses and earnings and could have a significant effect on the results of the Issuer's operations. The Issuer is also exposed to foreign exchange rate risk arising from its investments in foreign operations.

The Issuer has adopted specific frameworks to manage market risks as described on pages 66 through 71 of the 2019 MD&A incorporated by reference in the Registration Document. Despite these frameworks, the Issuer remains exposed to the risk of loss a result of market risk which may negatively impact on its financial position.

Liquidity and funding risk

Liquidity and funding risk ("**liquidity 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. 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 collateralized 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.

The Liquidity Coverage Ratio (LCR) is a Basel III metric that measures the sufficiency of high-quality liquid assets (HQLA) available to meet liquidity needs over a 30-day period in an acute stress scenario. The Basel Committee on Banking Supervision and Office of the Superintendent of Financial Institutions ("**OSFI**") regulatory minimum coverage level for LCR is currently 100%. However, in accordance with an OSFI announcement addressing concerns around the impact of the COVID-19 pandemic in the second quarter of 2020, Canadian banks are temporarily permitted to fall below the regulatory minimum level of 100% by using their HQLA buffer. The Issuer's average LCR for the quarter ended October 31, 2019 and the quarter ended April 30, 2020 were 127% and 130%, respectively. Despite the Issuer's liquidity risk management policy described on pages 71 through 79 of the 2019 MD&A incorporated by reference into the Registration Document, any significant deterioration in its liquidity position may lead to an increase in funding costs or constrain the volume of new lending. These factors may adversely impact the Issuer's financial performance and position.

Insurance risk

Insurance risk refers to the potential financial loss to the Issuer that may arise where the amount, timing and/or frequency of benefit and/or premium payments under insurance or reinsurance contracts are different than expected. Insurance risk is distinct from those risks covered by other parts of the Issuer's risk management framework (e.g., credit, market and operational risk) where those risks are ancillary to, or accompany, the risk transfer. Given that the Issuer's Canadian business involves life, health, home, travel and auto insurance and its international insurance business offers life, disability and longevity reinsurance products, the Issuer's four insurance sub-risks are: morbidity, mortality, longevity and travel risk. Insurance risk may negatively impact the Issuer's financial performance and condition. See a description of the Issuer's insurance business on pages 33 and 36 of the 2019 MD&A incorporated by reference into the Registration Document.

3. Operational risk

Operational risk is the risk of loss or harm 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 and third party activities and failure to manage operational risk can result in direct or indirect financial loss, reputational impact or regulatory censure.

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 FCA or as a supervised firm regulated by the FCA or PRA.

As at October 31, 2019, risk weighted assets of the Issuer amounted to C$512,856 million, C$66,104 million of which was for operational risk (compared to C$417,835 million for credit risk and C$28,917 million for market risk). As at April 30, 2020, risk weighted assets of the Issuer amounted to C$558,412 million, C$67,945 million of which was for operational risk (compared to C$463,567 million for credit risk and C$26,900 million for market risk.

The Issuer's operations expose it to many different operational risks, which may adversely affect its businesses and financial results. In addition to cybersecurity, data management and privacy, and third party risk, which are discussed above in "1. Top and emerging risks", the Issuer's results could also be adversely affected by risks associated with money laundering and terrorist financing:

Money laundering is any act or attempt to disguise the source of money or assets derived from criminal activity and terrorist financing is the provision of funds for terrorist activity. The Issuer maintains an enterprise-wide program designed to deter, detect and report suspected money laundering and terrorist financing activities across the organization, while ensuring compliance with the laws and regulations of the various jurisdictions in which the Issuer operates. Despite the Issuer's compliance programmes, non-compliance may still occur, leading to enforcement actions, criminal prosecutions, penalties and reputational damage which could negatively impact its financial performance and condition.

4. Strategic risks

Strategic risk

Strategic risk is the risk that the Issuer or particular business areas of the Issuer will make inappropriate strategic choices, or will be unable to successfully implement selected strategies or achieve the expected benefits. For more information on the Issuer's strategic goals in each of its business segments, see pages 21 to 42 of the 2019 MD&A incorporated by reference into the Registration Document. Business strategy is a major driver of the Issuer's risk appetite and consequently the strategic choices the Issuer makes in terms of business mix determine how the Issuer's risk profile changes. The Issuer's ability to execute on its objectives and strategic goals will influence its financial performance. If the Issuer is unable to successfully implement selected strategies or related plans and decisions, if the Issuer makes inappropriate strategic choices or if the Issuer makes a change to its strategic goals, its financial performance and condition could be adversely affected.

Reputation risk

Reputation risk is the risk of an adverse impact on stakeholders' perception of the Issuer due to (i) an activity of the Issuer, its representatives, third party service providers, or clients, or (ii) public sentiment towards a global or industry issue. The Issuer's reputation is rooted in the perception of its stakeholders, and the trust and loyalty they place in the Issuer is core to the Issuer's purpose as a financial services organization. A strong and trustworthy reputation will generally strengthen the Issuer's market position, reduce the cost of capital, increase shareholder value, strengthen the Issuer's resiliency, and help attract and retain top talent. Conversely, damage to the Issuer's reputation can result in reduced share price and market capitalization, increased cost of capital, loss of strategic flexibility, inability to enter or expand into markets, loss of client loyalty and business, or regulatory fines and penalties. The sources of reputation risk are widespread; risk to the Issuer's reputation can occur in connection with credit, regulatory, legal and operational risks. The Issuer can also experience reputation risk from a failure to maintain an effective control environment, exhibit good conduct, or have strong risk culture practices.

Legal and regulatory environment and regulatory compliance risk

(a) Legal and regulatory environment

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 in the other jurisdictions in which it conducts business. 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 Issuer continues to respond to these and other developments and is working to minimize any potential adverse business or economic impact. The following provides a high-level summary of some of the key regulatory changes that have potential to increase the Issuer's costs, impact its profitability, and increase the complexity of the Issuer's operations.

(i) Consumer Protection

The Canadian federal government has focused its attention on issues relating to consumer protection and the sales practices of banks. While the government's proposed legislative changes to consumer protection provisions applicable to banks were approved on December 13, 2018, some of the changes have not yet become effective and the government remains in the early stages of developing a regulatory framework to support the new provisions.

(ii) Privacy

In May 2019, the Canadian government released a digital charter with principles for data use and governance, along with proposed privacy law reforms that include greater individual control over data and stronger regulatory enforcement and oversight. In addition, in June 2019, the Standing Senate Committee on Banking, Trade and Commerce released its report calling for urgent legal reform to quickly advance open banking. Although timing is uncertain, significant reform is anticipated that may impact Canadian and international business processes and privacy risk management practices.

Outside of Canada, unprecedented privacy breach fines and settlements have been issued, demonstrating increasing regulatory vigilance and enforcement. The CCPA, which became effective on January 1, 2020, is currently the most comprehensive state privacy law in the U.S., and includes numerous new and expanded privacy requirements and obligations for companies doing business in the state, or collecting California residents' personal information. The U.S. Regional Head of Privacy is coordinating activities across the Issuer's U.S. businesses, and a U.S. Information Governance and Privacy Committee was established to monitor the implementation of the CCPA and future state privacy laws as well as to oversee privacy issues. Legislative and regulatory developments are also being closely monitored since the General Data Protection Regulation became law in the EU. The Office of the Privacy Commissioner of Canada (OPC) continues to call for more modern legislation, including the ability to audit businesses and fine companies that do not adhere to privacy laws. These actions demonstrate the ongoing trend toward increased regulatory intervention in the use and safeguarding of personal information, and the Issuer is reviewing the potential implications for the Issuer's various businesses. The Issuer's Global Privacy Program is responsible for ensuring the Issuer's organization meets these evolving global principles.

(iii) Canadian Anti-Money Laundering (AML) regulations

In July 2019, amendments to Canada's Proceeds of Crime (Money Laundering) and Terrorist Financing Act regulations were released and will become effective by June 2021. These amendments aim to improve the effectiveness of Canada's anti-money laundering and counter-terrorism financing regime, and to improve compliance with international standards. New regulations, which represent increased oversight and regulatory monitoring, will require substantial changes to the Issuer's client-facing, transaction and payment processing, and records management systems mainly due to the need for the capture of additional client data.

(iv) Interest Rate Benchmark Reform

London Interbank Offered Rate (LIBOR) is the most widely referenced benchmark interest 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 and certain other benchmark rates to alternative risk-free, or nearly risk-free, rates that are based on actual overnight transactions. However, some regulators and market participants continue to evaluate other options. In addition to the U.S. and U.K., regulators and national central banks internationally, including the Bank of Canada, have warned the market they will need to be prepared for certain benchmark rates 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 certain benchmark rates as the reference rate, will be impacted.

(v) Canadian Benchmark Rate for Qualifying Insured Mortgages

On February 18, 2020, the Department of Finance Canada announced changes to the minimum qualifying rate for insured mortgages. As a result of a review conducted by the federal financial agencies, it was concluded that the minimum qualifying benchmark rate should be more responsive to changes in market conditions. The new benchmark rate will be the weekly median 5-year fixed insured mortgage rate plus 2%, compared to the current benchmark rate of the five-year fixed rate posted by the Domestic Systemically Important Banks (D-SIBs). The Issuer is assessing the impacts and will continue to monitor for any further developments, including any future changes to the benchmark rate for uninsured mortgages.

(vi) Client focused reforms

The Canadian Securities Administrators (CSA) published amendments to National Instrument 31-103 to implement the Client Focused Reforms (Reforms), which are intended to increase the standard of conduct required for Canadian securities registrants. The Reforms enhance core requirements relating to conflicts of interest, suitability, know-your-product and know-your-client requirements, and also introduce new requirements relating to relationship disclosure, training and recordkeeping. The changes come into effect in two phases: the first phase relating to conflicts of interest and the related disclosure requirements comes into effect on June 30, 2021, and the second phase relating to the remaining requirements, on December 31, 2021. The requirements will primarily impact the Issuer’s Personal & Commercial Banking and Wealth Management platforms. The Issuer does not anticipate any significant challenges in meeting these requirements by the effective dates.

(vii) 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; 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.

(viii) United States Tax Reform

The majority of the provisions of the U.S. Tax Cuts and Jobs Act legislation (U.S. Tax Reform), which was passed in December 2017, took effect at the beginning of calendar 2018 or for fiscal years beginning in 2018. Regulations clarifying certain aspects of the new law, however, continue to be released. In December 2018, the U.S. Treasury released proposed regulations clarifying some of the international tax provisions of the law. In December 2019, the U.S. Treasury released final regulations and additional proposed regulations clarifying many of the rules for calculating a Base Erosion Anti-Abuse Tax (BEAT). The U.S. Treasury continues to release guidance on the U.S. Tax Reform. There has been no material impact for the Issuer; however, the Issuer will continue to monitor future guidance and the impact, if any, on the Issuer.

(ix) United States Regulatory Initiatives

Policymakers continue to evaluate and implement reforms to various U.S. financial regulations, which could result in either expansion or reduction to the U.S. regulatory requirements and associated changes in compliance costs. For example, the SEC has enacted Regulation Best Interest that establishes new standards of conduct for broker-dealers that make investment recommendations to retail customers. Broker-dealers will be required to comply starting in June 2020. Additionally, since August 2019, the financial regulatory agencies responsible for implementing the Volcker Rule have adopted amendments revising the requirements regarding proprietary trading and compliance programs, which are expected to reduce the Issuer's related compliance costs. In October 2019, the Fed and the Federal Deposit Insurance Corporation (FDIC) finalized rules related to resolution plans for bank holding companies, insured depository institutions, as well as foreign banks and their intermediate holding companies. Also in October 2019, the Fed, FDIC, and the Office of the Comptroller of the Currency (OCC) finalized rules related to enhanced prudential standards, regulatory capital, and liquidity requirements for foreign banking organizations operating in the U.S. In January 2020, the Fed finalized the Control and Divestiture Proceedings rule which is intended to clarify its process for determining when an entity is under control of a bank holding company and is effective on September 30, 2020. The rule is intended to simplify and provide greater transparency for determining control of a banking organization by establishing a comprehensive framework to determine when a company controls a bank or a bank controls a company. The Issuer will continue to monitor developments and any resulting implications for the Issuer.

(xi) U.K. and European Regulatory Reform

In addition to the implications from Brexit, which could impact the way in which the Issuer manages its operations and provides services in the U.K. and the EU, other forthcoming regulatory initiatives include:

- The EU's Securities Financing Transactions Regulation, which will require transaction reporting of securities financing transactions is expected to take effect in the third calendar quarter of 2020, extended from its previous effective date of the second calendar quarter of 2020;

- The EU's Central Securities Depository Regulation rules which are intended to increase discipline in the settlement of securities transactions and is scheduled to take effect in February 2021, extended from its previous effective date of September 2020; and

- The EU's published regulations on Sustainability-Related Disclosures which will require financial services firms to disclose their approaches to considering environmental, social and governance factors as part of their advice and investment decision process.

These regulations could increase compliance costs for the Issuer and the interpretation or application of these regulations could negatively impact the way in which the Issuer operates.

(b) Regulatory compliance risk

Regulatory compliance risk is the risk of potential non-conformance with laws, rules, regulations and prescribed practices in any jurisdiction in which the Issuer operates. Issues regarding compliance with laws and regulations can arise in a number of areas in a large complex financial institution such as the Issuer, and are often the result of inadequate or failed internal processes, people or systems.

Laws and regulations are in place to protect the financial and other interests of the Issuer's clients, investors and the public. As a large-scale global financial institution, the Issuer is subject to numerous laws and to extensive and evolving regulation by governmental agencies, supervisory authorities and self-regulatory organizations in Canada, the U.S., Europe and other jurisdictions in which the Issuer operates. In recent years, such regulation has become increasingly extensive and complex. In addition, the enforcement of regulatory matters has intensified. Recent resolution of such matters involving other global financial institutions have involved the payment of substantial penalties, agreements with respect to future operation of their business, actions with respect to relevant personnel and guilty pleas with respect to criminal charges.

Operating in this increasingly complex regulatory environment and intense regulatory enforcement environment, the Issuer is and has been subject to a variety of legal proceedings, including civil claims and lawsuits, criminal charges, regulatory examinations, investigations, audits and requests for information by various governmental regulatory agencies and law enforcement authorities in various jurisdictions, and the Issuer anticipates that its ongoing business activities will give rise to such matters in the future. Changes to laws, including tax laws, regulations or regulatory policies, as well as the changes in how they are interpreted, implemented or enforced, could adversely affect the Issuer, for example, by lowering barriers to entry in the businesses in which the Issuer operates, increasing the Issuer's costs of compliance or limiting the Issuer's activities and ability to execute its strategic plans. Further, there is no assurance that the Issuer always will be or will be deemed to be in compliance with laws, regulations or regulatory policies. Accordingly, it is possible that the Issuer could receive a judicial or regulatory judgment or decision that results in fines, damages, penalties, and other costs or injunctions, criminal convictions or loss of licences or registrations that would damage the Issuer's reputation and negatively impact its earnings and ability to conduct some of its businesses. In addition, the Issuer is subject to litigation arising in the ordinary course of its business and the adverse resolution of any litigation could have a significant adverse effect on the Issuer's results or could give rise to significant reputational damage, which in turn could impact the Issuer's future business prospects. For more information on the Issuer's ongoing litigation, see Note 26 of the 2019 Audited Consolidated Financial Statements and Note 10 of the Second Quarter 2020 Unaudited Interim Condensed Consolidated Financial Statements incorporated by reference in the Registration Document.

Regulatory compliance risk includes the regulatory risks associated with financial crimes (which include, but are not limited to, money laundering, bribery and sanctions), privacy, market conduct, consumer protection, business conduct, prudential, and other generally applicable non-financial requirements. See 1. Top and Emerging Risks-"Privacy, Data management and Third–Party Related Risks" and "Regulatory Changes".

Competitive Risk

Competitive risk is the risk of an inability to build or maintain a sustainable competitive advantage in a given market or markets and includes the potential for loss of market share due to competitors offering superior products and services. Competitive risk can arise within or outside the financial sector, from traditional or non-traditional competitors, domestically or globally. The competition for clients among financial services companies in the markets in which the Issuer operates is intense. Client loyalty and retention can be influenced by a number of factors, including new technology used or services offered by the Issuer's competitors, relative service levels and prices, product and service attributes, the Issuer's reputation, actions taken by the Issuer's competitors, and adherence with competition and anti-trust laws. Other companies, such as insurance companies and non-financial companies, as well as new technological applications, are increasingly offering services traditionally provided by banks. This competition could also reduce the Issuer's revenue which could adversely affect the Issuer's results.

5. Macroeconomic risks

Impact of pandemic

Pandemics, epidemics or outbreaks of an infectious disease in Canada or worldwide could have an adverse impact on the Issuer's business, including changes to the way the Issuer operates and on its financial results and condition. During the second quarter of 2020, the spread of the COVID-19 pandemic adversely affected the Issuer's business and caused uncertainty in the global economy and it continues to pose risks to the global economy, the Issuer's clients and its business operations. Governments and regulatory bodies in affected areas have imposed a number of measures designed to contain the pandemic, including widespread business closures, travel restrictions, quarantines, and restrictions on gatherings and events. These measures are significantly impacting global economic activity and contributing to increased market volatility and changes to the macroeconomic environment. As impacts continue to materialize, the effects of the disruption on the Issuer's business strategies and initiatives have adversely affected and may continue to adversely affect the Issuer's financial results, including the realization of credit, market, or operational risk losses.

Governments, monetary authorities, regulators and financial institutions, including the Issuer, have taken actions to support the economy and financial system. These actions include fiscal, monetary and other financial measures to increase liquidity, and provide financial aid to individual, small business, commercial and corporate clients. Additionally, regulatory relief measures in support of financial institutions has also been provided. For more information on these programs, refer to the Relief programs, Liquidity and funding risk and Capital management sections of the Second Quarter 2020 MD&A incorporated by reference in the Registration Document.

The Issuer is closely monitoring the potential continued effects and impacts of the COVID-19 pandemic, which is a rapidly evolving situation. Uncertainty remains as to the full impacts of COVID-19 on the global economy, financial markets, and the Issuer, including on the Issuer's financial results, regulatory capital and liquidity ratios and ability to meet regulatory and other requirements. The ultimate impacts will depend on future developments that are highly uncertain and cannot be predicted, including the scope, severity, duration and the possibility of subsequent waves of the pandemic, and the effectiveness of actions and measures taken by government, monetary and regulatory authorities and other third parties. With respect to client relief programs, the Issuer may face challenges, including increased risk of client disputes, litigation, government and regulatory scrutiny as a result of the effects of the COVID-19 pandemic on market and economic conditions and actions government authorities take in response to those actions. The Issuer may also face increased operational and reputational risk and financial losses such as higher credit losses amongst other things, depending on the effectiveness of these programs for the Issuer's individual, small business, commercial and corporate clients. The effectiveness of these programs will depend on the duration and scale of COVID-19 and will vary by region and industry, with varying degrees of benefit to the Issuer's clients.

The COVID-19 pandemic has and may continue to result in disruptions to the Issuer's clients and the way in which it conducts its business, including the closure of certain branches, increased staff working off premise, and changes to the Issuer's operations due to higher volumes of client requests, as well as disruptions to key suppliers of the Issuer's goods and services. These factors have and may continue to adversely impact the Issuer's business operations and the quality and continuity of service to customers. To date, the Issuer has taken proactive measures through its business continuity plans and its crisis management teams have increased their efforts to preserve the well-being of the Issuer's employees and its ability to serve clients. Additionally, the Issuer has launched various relief programs beyond the available government programs to further support its clients in financial need. For more information on the Issuer's relief programs, refer to the Relief programs section of the Second Quarter 2020 MD&A incorporated by reference in the Registration Document.

In addition to the impact that the COVID-19 pandemic has on the Issuer's business, it may also continue to increase financial stress on its clients. This could lead to increased pressure on the Issuer's individual clients as well as on the financial performance of its small business, commercial and corporate clients in conjunction with operational constraints due to the impacts of social distancing, including but not limited to continued closures or reduced operating hours, lost sales opportunities and/or increased operating costs, which could result in higher than expected credit losses for the Issuer.

If the COVID-19 pandemic is prolonged, including the possibility of subsequent waves, or further diseases emerge that give rise to similar effects, the adverse impact on the economy could deepen and result in further volatility and declines in financial markets. Moreover, it remains uncertain how the macroeconomic environment, societal and business norms will be impacted following this pandemic. Unexpected developments in financial markets, regulatory environments, or consumer behaviour and confidence may have adverse impacts on the Issuer's financial results and condition, business operations and reputation, for a substantial period of time.

In virtually all aspects of the Issuer's operations, the Issuer's view of risks is not static. Consistent with its Enterprise Risk Management Framework, the Issuer continues to evaluate top risks which are evolving and emerging risks arising from the impacts of the COVID-19 pandemic, including:

- Information Technology (IT) and Cyber risks have increased as malicious activities are creating more threats for cyber-attacks including COVID-19 phishing emails, malware-embedded mobile apps that purport to track infection rates, and targeting of vulnerabilities in remote access platforms as companies move to telework arrangements. The Issuer's IT and cyber controls are operating effectively and it is continuing to monitor the threat landscape.

- Privacy, Data and Third Party risks have also heightened as the use of telework arrangements have become common practice. As the Issuer's employees continue to work from home, the Issuer is continuously monitoring and enforcing best practices as it seeks to maintain the privacy and confidentiality of all sensitive information. The Issuer's security awareness program is required to be completed by each employee annually and includes cyber awareness training on managing risks while working remotely. Third party providers critical to the Issuer's operations are being monitored for any impact on their ability to deliver services, including fourth party risk.

- Canadian Housing and Household Indebtedness risks have increased as a result of a rise in unemployment and decline in labour participation. While interest rate cuts, government support programs and relief programs offered by banks will help many households, concerns related to housing affordability in certain markets and levels of Canadian household debt were already elevated before the additional challenges brought on by the COVID-19 pandemic and could continue to rise if the COVID-19 pandemic worsens, resulting in, among other things, higher credit losses.

Systemic Risk

Systemic risk is the risk that the financial system as a whole, or a major part of it – either in an individual country, a region, or globally – is put in real and immediate danger of collapse or serious damage with the likelihood of material damage to the economy, and that this will result in financial, reputation, legal or other risks for the Issuer.

The Issuer's earnings are significantly affected by the general business and economic conditions in the geographic regions in which it operates. These conditions include consumer saving and spending habits as well as consumer borrowing and repayment patterns, business investment, government spending, exchange rates, sovereign debt risks, the level of activity and volatility of the capital markets, strength of the economy and inflation. For example, an extended economic downturn may result in higher unemployment and lower family income, corporate earnings, business investment and consumer spending, and could adversely affect the demand for the Issuer's loan and other products and result in higher provisions for credit losses. Given the importance of the Issuer's Canadian operations, an economic downturn in Canada or in the U.S. would largely affect the Issuer's personal and business lending activities in its Canadian banking businesses, including mortgages and credit cards, and could significantly impact the Issuer's results of operations. The U.S. economy is vulnerable to trade tensions with China and the Canadian economy is vulnerable to trade tensions with, and between, the U.S. and China, given Canada's trade relationship with both nations.

The Issuer's earnings are also sensitive to changes in interest rates. While the Bank of Canada left its policy rate unchanged in 2019, the Bank of Canada lowered its policy rate to 0.25% in March from 1.75% at the start of calendar 2020 and the U.S. Fed lowered its policy rate to a range of 0-0.25% in March from 1.50%-1.75% at the start of calendar 2020. A continuing low interest rate environment in Canada, the U.S. and globally would result in net interest income being unfavourably impacted by spread compression across many of the Issuer's businesses while an increase in interest rates would benefit the Issuer's businesses. However, a significant increase in interest rates could also adversely impact household balance sheets. This could result in credit deterioration which might negatively impact the Issuer's financial results, particularly in some of its Personal & Commercial Banking and Wealth Management businesses.

Deterioration in global capital markets could result in volatility that would impact results in the Issuer's Capital Markets business, while in Wealth Management weaker market conditions would lead to lower average fee-based client assets and transaction volumes. In addition, worsening financial and credit market conditions may adversely affect the Issuer's ability to access capital markets on favourable terms and could negatively affect the Issuer's liquidity, resulting in increased funding costs and lower transaction volumes in Capital Markets and Investor & Treasury Services.

Systemic risk is considered to be the least controllable risk facing the Issuer. The Issuer's ability to mitigate this risk when undertaking business activities is limited, other than through collaborative mechanisms between key industry participants, and, as appropriate, the public sector, to reduce the frequency and impact of these risks.

6. Overview of other risks

In addition to the risks described above, there are other risk factors, described below, which may adversely affect the Issuer's businesses and financial results. The following discussion is not exhaustive as other factors could adversely affect the Issuer's results.

Government fiscal, monetary and other policies

The Issuer's businesses and earnings are affected by monetary policies that are adopted by the BoC, the Federal Reserve in the U.S., the European Central Bank in the European Union and monetary authorities in other jurisdictions in which the Issuer operates; as well as the fiscal policies of the governments of Canada, the U.S., Europe and such other jurisdictions. Such policies can also adversely affect the Issuer's clients and counterparties in Canada, the U.S. and internationally, which may increase the risk of default by such clients and counterparties.

Tax risk and transparency

Tax risk refers to the risk of loss related to unexpected tax liabilities. The tax laws and systems that are applicable to the Issuer are complex and wide ranging. As a result, the Issuer ensures that any decisions or actions related to tax always reflect its assessment of the long-term costs and risks involved, including their impact on the Issuer's relationship with clients, shareholders, and regulators, and its reputation.

The Issuer's tax strategy is designed to ensure transparency and support its business strategy, and is aligned with the Issuer's corporate vision and values. The Issuer seeks to maximize shareholder value by ensuring that its businesses are structured in a tax-efficient manner while considering reputational risk by being in compliance with all laws and regulations. The Issuer's framework seeks to ensure that it:

- Acts with integrity and in a straightforward, open and honest manner in all tax matters;
- Ensures tax strategy is aligned with the Issuer's business strategy supporting only bona fide transactions with a business purpose and economic substance;
- Ensures all intercompany transactions are conducted on arm's length terms;
- Ensures the Issuer's full compliance and full disclosure to tax authorities of its statutory obligations; and
- Endeavours to work with the tax authorities to build positive long-term relationships and where disputes occur, address them constructively.

With respect to assessing the needs of its clients, the Issuer considers a number of factors including the purpose of the transaction. The Issuer seeks to ensure that it only supports bona fide client transactions with a business purpose and economic substance. Should the Issuer become aware of client transactions that are aimed at evading their tax obligations, the Issuer will not proceed with the transactions.

Given that the Issuer operates globally, complex tax legislation and accounting principles have resulted in differing legal interpretations between the respective tax authorities the Issuer deals with and itself, and the Issuer is at risk of tax authorities disagreeing with prior positions the Issuer has taken for tax purposes. When this occurs, the Issuer is committed to an open and transparent dialogue with the tax authorities to ensure a quick assessment and prompt resolution of the issues where possible. Failure to adequately manage tax risk and resolve issues with tax authorities in a satisfactory manner could adversely impact the Issuer's results, potentially to a material extent in a particular period, and/or significantly impact the Issuer's reputation.

Environmental and social risk

Environmental and social (E&S) risk is the risk that an E&S issue associated with a client, transaction, product, supplier or activity will create a risk of loss of financial, operational, legal and/or reputational value to the Issuer. E&S issues include, but are not limited to, site contamination, waste management, land and resource use, biodiversity, water quality and availability, climate change, environmental regulation, human rights, Indigenous Peoples' rights and consultation, and community engagement.

DOCUMENTS INCORPORATED BY REFERENCE

The following documents which have previously been published are hereby incorporated in, and form part of, this Registration Document:

(a) the entire Annual Information Form dated December 3, 2019 (the "**2019 AIF**") (available at: *https://www.rbc.com/investor-relations/_assets-custom/pdf/aif2019.pdf*), including, without limitation, the following sections:

(i) "Description of the Business – General Summary" on page 3;

(ii) "Competition" on pages 3 and 4; and

(iii) "Appendix A – Principal Subsidiaries" on page 27; and

(b) the following sections of the Bank's 2019 Annual Report (the "**2019 Annual Report**") (available at: *https://annualreports.rbc.com/ar2019/site-content/uploads/2019/12/01-RBC_AR_2019_ENG.pdf*) for the year ended October 31, 2019:

(i) the audited annual consolidated financial statements, which comprise the consolidated balance sheets as of October 31, 2019 and 2018, and the related consolidated statements of income, comprehensive income, changes in equity, and cash flows for the years then ended, including the related notes, prepared in accordance with International Financial Reporting Standards as issued by the International Accounting Standards Board on pages 111 through 211, together with Management's Report on Internal Control over Financial Reporting as of October 31, 2019, the Independent Auditor's Report and the Report of Independent Registered Public Accounting Firm on pages 112, 113 and 117, respectively, (the "**2019 Audited Consolidated Financial Statements**");

(ii) the entire Management's Discussion and Analysis for the year ended October 31, 2019 (the "**2019 MD&A**") on pages 12 through 109, including, without limitation, a description of risk factors related to the Bank and its business, and the steps taken to manage such risks, under the risk sections on pages 47 to 89 and information about trends, commitments, events and uncertainties for the Bank and each business segment known to the Bank's management which is provided under the heading "Economic, market and regulatory review and outlook – data as at December 3, 2019" on pages 14 to 15, "Strategic Priorities" and "Outlook" on pages 25, 29, 34, 37, and 39, "Quarterly results and trend analysis" on page 43 and 44, together with the caution provided under the heading "Caution regarding forward-looking statements" on page 12;

(iii) the information about tax assessments and examinations and legal and regulatory matters to which the Issuer and its Subsidiaries are or have been subject in Note 23 on page 198 and Note 26 on pages 201 and 202, respectively; and

the remainder of the 2019 Annual Report is either not relevant for investors or covered elsewhere in this Registration Document and is not incorporated by reference;

(c) the following sections of the Bank's Second Quarter 2020 Report to Shareholders (the "**Second Quarter 2020 Report to Shareholders**") (available at: https://www.rbc.com/investor-relations/_assets-custom/pdf/2020q2_report.pdf):

(i) the entire Management's Discussion and Analysis (the "**Second Quarter 2020 MD&A**") on pages 2 to 51, including, without limitation, information about trends, commitments, events and uncertainties for the Bank known to the Bank's management which is provided on pages 4 to 9 and 23 to 24 under the headings "Economic, market and regulatory review and outlook – data as at May 26, 2020", "Significant developments: COVID-19" and "Quarterly results and trend analysis", respectively, together with the caution provided under the heading "Caution regarding forward-looking statements" on page 2;

(ii) the unaudited interim condensed consolidated financial statements, which comprise the unaudited interim condensed consolidated balance sheet of the Bank as of April 30, 2020 and the related unaudited interim condensed consolidated statements of income, comprehensive income, changes in equity, and cash flows for the three and six months ended April 30, 2020 and April 30, 2019 and selected explanatory notes (the "**Second Quarter 2020 Unaudited Interim Condensed Consolidated Financial Statements**"), set out on pages 53 to 83 presented in compliance with International Accounting Standard (IAS) 34 Interim Financial Reporting, which have not been audited or reviewed by auditors pursuant to the International Standard on Review Engagements (UK and Ireland) 2410; and

(iii) the information about legal proceedings and regulatory matters to which the Issuer and its subsidiaries are or have been subject in Note 10 on page 81;

the remainder of the Issuer's Second Quarter 2020 Report to Shareholders either is not relevant for an investor or is covered elsewhere in this Registration Document and is not incorporated by reference;

provided that any statement contained in a document, all or the relative portion of which is incorporated by reference, shall be deemed to be modified or superseded for the purpose of this document to the extent that a statement contained herein or in any supplement hereto filed under Article 23 of the Prospectus Regulation or section 87G of FSMA, as the case may be, including any document incorporated therein by reference, modifies or supersedes such earlier statement (whether expressly, by implication or otherwise).

Information, documents or statements expressed to be incorporated by reference into, or that form part of one or more of, the documents noted above form part of this document but do not form part of the Registration Document of the Issuer approved by the FCA for purposes of the Prospectus Regulation.

Copies of this Registration Document and the documents incorporated by reference herein and any supplement hereto approved by the FCA can be viewed on the Issuer's website at *https://www.rbc.com/investor-relations/european-senior-notes-program.html* and 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 20th Floor, 200 Bay Street, Toronto, Ontario, Canada M5J 2J5, Attention: Senior Vice President, Wholesale Finance and Investor Relations, (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, and (c) at the specified offices of any other paying agent (together with The Bank of New York Mellow, London Branch, the "**Paying Agents**") appointed in connection with the issuance of securities with respect to which the Registration Document forms part of a prospectus prepared by the Issuer or relating to such securities. For the avoidance of doubt, unless specifically incorporated by reference into this Registration Document, the information contained on the websites referred to above is not incorporated in, and does not form part of, this Registration Document or a prospectus.

DESCRIPTION OF ROYAL BANK OF CANADA

The information appearing below is supplemented by the more detailed information contained in the documents incorporated by reference in this Registration Document. See paragraphs (a), (b) and (c) of the section entitled "Documents Incorporated by Reference".

History and Development of the Issuer

Royal Bank of Canada (the "**Bank**") is a Schedule I bank under the *Bank Act* (Canada) (the "**Bank Act**"), which constitutes its charter. The Bank was created as Merchants Bank in 1864 and was incorporated under the "Act to Incorporate the Merchants' Bank of Halifax" assented to June 22, 1869. The Bank changed its name to The Royal Bank of Canada in 1901 and to Royal Bank of Canada in 1990.

The Bank's corporate headquarters are located at Royal Bank Plaza, 200 Bay Street, Toronto, Ontario, Canada M5J 2J5 and the telephone contact number is +1 (416) 974-5151. Its head office is located at 1 Place-Ville Marie, Montreal, Quebec, Canada. The Bank's website can be found at *http://www.rbc.com*. For the avoidance of doubt, unless specifically incorporated by reference into this Registration Document, the information contained on the websites referred to above is not incorporated in, and does` not form part of, the Registration Document or a prospectus.

On November 21, 2017, the Bank was added to the list of global systemically important banks ("**G-SIBs**") by the Financial Stability Board ("**FSB**") and was designated a G-SIB by the FSB. On November 22, 2019 the Issuer was re-designated as a G-SIB by the FSB. The Issuer does not expect any significant impacts resulting from the designation.

RBC Group and its Principal Activities and Markets

The Bank's business and powers are set out in Part VIII of the Bank Act. In particular, section 409 provides that, subject to the Bank Act, the Bank shall not engage in or carry on business other than the business of banking and such business as generally appertains thereto.

The RBC Group is a global financial institution with a purpose-driven, principles-led approach to delivering leading performance. The RBC Group's success comes from the 84,000+ employees who bring its vision, values and strategy to life so it can help its clients thrive and communities prosper. As Canada's biggest bank, and one of the largest in the world based on market capitalization, the RBC Group has a diversified business model with a focus on innovation and providing exceptional experiences to the Issuer's 17 million clients in Canada, the U.S. and 34 other countries. As at April 30, 2020, the RBC Group has total assets of approximately C$1.676 trillion and total equity attributable to shareholders of approximately C$84.935 billion.

The RBC Group's business segments are Personal & Commercial Banking, Wealth Management, Insurance, Investor & Treasury Services and Capital Markets. Additional information about the RBC Group's business and each segment (including segment results) can be found under "Overview and outlook" beginning on page 13 and under "Business segment results" beginning on page 21 of the Issuer's 2019 Annual Report, which sections form part of the 2019 MD&A incorporated by reference herein and under "Overview and outlook" beginning on page 2 and under "Business segment results" beginning on page 14 of the Issuer's Second Quarter 2020 Report to Shareholders, which sections form part of the Second Quarter 2020 MD&A incorporated by reference herein.

The Bank's common shares are listed on the Toronto Stock Exchange in Canada, New York Stock Exchange in the U.S. and the SIX Swiss Exchange in Switzerland. The trading symbol is "RY". Its preferred shares are listed on the Toronto Stock Exchange.

Except as indicated in Notes 20 and 21 of the 2019 Audited Consolidated Financial Statements, there are no other convertible bonds or options on the Bank's common or preferred shares outstanding which have been issued by the Bank or by group companies of the Bank.

Except for the number of Treasury Shares as at April 30, 2020 specified in the Bank's Second Quarter 2020 Unaudited Interim Condensed Consolidated Financial Statements incorporated herein by reference, neither the Bank nor any third party on its behalf owns any of its issued common or preferred shares.

Competition

The principal markets in which the Bank competes as at October 31, 2019 are described in the 2019 MD&A incorporated by reference herein.

Organizational Structure

The Bank's principal subsidiaries as at October 31, 2019 are listed in "Appendix A" of the Issuer's 2019 AIF, which is incorporated by reference herein.

ISSUER RATINGS

Each of the Bank's solicited debt and preferred share ratings as at the date of this Registration Document are listed below:

	Moody's USA	S&P USA	Fitch	DBRS
	Rating	**Rating**	**Rating**	**Rating**
Legacy Senior Long-term Debt[1]	Aa2	AA-	AA+	AA (high)
Senior Long-term Debt[2]	A2	A	AA	AA
Subordinated Debt	Baa1	A	A+	AA (low)
NVCC Subordinated Debt[3]	Baa1(hyb)	A-	A+	A
Short-term Senior Debt	P-1	A-1+	F1+	R-1 (high)
Preferred Shares	Baa3	BBB+	-	Pfd-1 (low)
NVCC Preferred Shares[3]	Baa3(hyb)	BBB / P-2[4]	-	Pfd-2(high)
Outlook	Stable	Stable	Negative	Stable

Notes:
[1] Includes senior long-term debt issued prior to September 23, 2018 and senior long-term debt issued on or after September 23, 2018 which is excluded from the Canadian Bank Recapitalization ("Bail-in") regime.
[2] Includes senior long-term debt issued on or after September 23, 2018 which is subject to conversion under the Bail-in regime.
[3] Non-viability contingent capital or NVCC.
[4] It is the practice of S&P USA to present an issuer's preferred share ratings on both the global rating scale and on the Canadian national scale when listing the ratings for a particular issuer.

Credit ratings including stability or provisional ratings (collectively, "**Ratings**") are not recommendations to purchase, sell or hold a security or financial obligation inasmuch as they do not comment on market price or suitability for a particular investor. Ratings may not reflect the potential impact of all risks on the value of securities or financial obligation. In addition, real or anticipated changes in the rating assigned to a security or financial obligation will generally affect the market value of that security or financial obligation. Ratings are determined by the rating agencies based on criteria established from time to time by them and are subject to revision or withdrawal at any time by the rating organization. Each Rating listed in the chart above should be evaluated independently of any other Rating applicable to the Issuer's debt and preferred shares. As is customary, the Issuer pays ratings agencies to assign Ratings for the parent company as well as its subsidiaries, and for certain other services.

FINANCIAL SUMMARY

With the exception of the figures for return on common equity, information in the tables below for the years ended October 31, 2019 and 2018 and for the six-month periods ended April 30, 2020 and 2019 have been extracted from the Issuer's 2019 audited consolidated financial statements, prepared in accordance with IFRS as issued by the International Accounting Standards Board and the unaudited interim condensed consolidated financial statements for the six-month period ended April 30, 2020 and 2019 presented in compliance with IAS 34 Interim Financial Reporting, respectively, all of which are incorporated by reference in this Registration Document. The amounts under return on common equity for the years ended October 31, 2019 and 2018 and for the six-month periods ended April 30, 2020 and 2019 have been extracted from the Issuer's 2019 MD&A and its Second Quarter 2020 MD&A, respectively.

An audit comprises audit tests and procedures deemed necessary for the purpose of expressing an opinion on financial statements taken as a whole. An audit opinion has not been expressed on individual balances of accounts or summaries of selected transactions in the table below.

Selected Consolidated Balance Sheet Information

	As at April 30, 2020	As at October 31, 2019	As at October 31, 2018
	(in millions of Canadian dollars)		
Loans, net of allowance for loan losses	673,448	618,856	576,818
Total assets	1,675,682	1,428,935	1,334,734
Deposits	1,009,447	886,005	836,197
Other liabilities	569,678	447,827	408,083
Subordinated debentures	9,774	9,815	9,131
Non-Controlling interests	105	102	94
Equity attributable to shareholders	84,935	83,523	79,861

Consolidated and Condensed Consolidated Statement of Income Information[2]

	Six-months ended April 30, 2020	Six-months ended April 30, 2019[1]	Year ended October 31, 2019	Year ended October 31, 2018
	(in millions of Canadian dollars, except per share amounts and percentage amounts)			
Net interest income	10,686	9,620	19,749	17,952
Non-interest income	12,483	13,468	26,253	24,624
Total revenue	23,169	23,088	46,002	42,576
Provision for credit losses (PCL)	3,249	940	1,864	1,307
Insurance policyholder benefits, claims and acquisition expense	1,437	2,385	4,085	2,676
Non-interest expense	12,320	11,828	24,139	22,833
Net Income	4,990	6,402	12,871	12,431
Earnings per share				
– basic	$3.41	$4.36	$8.78	$8.39
– diluted	$3.40	$4.34	$8.75	$8.36
Return on common equity (ROE)[3,4]	12.5%	17.1%	16.8%	17.6%

1. Commencing Q4 2019, the interest component and the accrued interest payable recorded on certain deposits carried at Fair Value Through Profit and Loss (FVTPL) previously presented in trading revenue and deposits, respectively, are presented in net interest income and other liabilities, respectively. Comparative amounts have been reclassified to conform with this presentation.

2. Effective November 1, 2019, the Issuer adopted IFRS 16 Leases. Results from periods prior to November 1, 2019 are reported in accordance with IAS 17 Leases. For further details on the impacts of the adoption of IFRS 16 including the description of accounting policies selected, refer to Note 2 of the Issuer's Second Quarter 2020 Unaudited Interim Condensed Consolidated Financial Statements.

3. This measure does 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 Issuer's 2019 Management's Discussion and Analysis in the Issuer's 2019 Annual Report and the Key performance and non-GAAP measures section of the Issuer's Second Quarter 2020 Management's Discussion and Analysis in the Issuer's Second Quarter 2020 Report to Shareholders.

4. 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 Issuer's 2019 Management's Discussion and Analysis in the Issuer's 2019 Annual Report and the Key performance and non-GAAP measures section of the Issuer's Second Quarter 2020 Management's Discussion and Analysis in the Issuer's Second Quarter 2020 Report to Shareholders.

DIRECTORS

The Directors of the Bank, each of whose address is the executive offices of the Bank, Royal Bank Plaza, 200 Bay Street, South Tower, Toronto, Ontario, Canada M5J 2J5, their function in the Bank and their other principal activities (if any) outside the Bank of significance to the Bank, are as follows[1]:

Name	Function	Other Principal Activities outside the Bank
Andrew A. Chisholm Toronto, Ontario	Director	Corporate Director
Jacynthe Côté Montreal, Québec	Director	Chair of the Board, Hydro-Québec
Toos N. Daruvala New York, New York	Director	Co Chief Executive Officer, MIO Partners, Inc.
David F. Denison Toronto, Ontario	Director	Chair of the Board, Element Fleet Management Corp.
Alice D. Laberge Vancouver, British Columbia	Director	Corporate Director
Michael H. McCain Toronto, Ontario	Director	President and Chief Executive Officer, Maple Leaf Foods Inc.
David I. McKay Toronto, Ontario	President and Chief Executive Officer and Director	Not applicable
Dr. Heather Munroe-Blum Montreal, Québec	Director	Chairperson, Canada Pension Plan Investment Board
Kathleen P. Taylor Toronto, Ontario	Chair of the Board and Director	Corporate Director
Maryann Turcke New York, New York	Director	Chief Operating Officer, National Football League
Bridget A. van Kralingen New York, New York	Director	Senior Vice-President, Global Industries, Platforms and Blockchain, IBM Corporation

[1] On July 8, 2020 RBC announced that Cynthia Devine was appointed to its Board of Directors effective August 1, 2020.

Thierry Vandal Mamaroneck, New York	Director	President, Axium Infrastructure US Inc.
Frank Vettese Toronto, Ontario	Director	Corporate Director
Jeffery W. Yabuki Fox Point, Wisconsin	Director	President and Chief Executive Officer, Fiserv, Inc.

There are no conflicts of interests between any duties owed to the Bank by the Directors and the private interests and/or other duties owed by these individuals. If a Director were to have a material interest in a matter being considered by the Board or any of its Committees, such Director would not participate in any discussions relating to, or any vote on, such matter.

MAJOR SHAREHOLDERS

To the extent known to the Bank, the Bank is not directly or indirectly owned or controlled by any person.

Subject to certain exceptions contained in the Bank Act, no person may be a major shareholder of a bank having equity of C$12 billion or more (which includes the Bank). A person is a major shareholder if: (a) the aggregate of the shares of any class of voting shares of the Bank beneficially owned by that person, by entities controlled by that person and by any person associated or acting jointly or in concert with that person is more than 20% of that class of voting shares, or (b) the aggregate of shares of any class of non-voting shares of the Bank beneficially owned by that person, by entities controlled by that person and by any person associated or acting jointly or in concert with that person is more than 30% of that class of non-voting shares.

Additionally, no person may have a significant interest in any class of shares of a bank (including the Bank) unless the person first receives the approval of the Minister of Finance. For purposes of the Bank Act, a person has a significant interest in a class of shares of a bank where the aggregate of any shares of the class beneficially owned by that person, by entities controlled by that person and by any person associated or acting jointly or in concert with that person exceeds 10% of all of the outstanding shares of that class of shares of such bank.

MATERIAL CONTRACTS

The Bank has not entered into any contracts outside the ordinary course of the Bank's business which could materially affect the Bank's obligations in respect of any securities to be issued by the Bank.

RECENT DEVELOPMENTS

On March 11, 2020, the World Health Organization declared the outbreak of a strain of novel coronavirus disease, COVID-19, a global pandemic. The breadth and depth of the impact of COVID-19 on the global economy and financial markets continues to evolve with disruptive effects in countries in which the Issuer operates and the global economy while also contributing to increased market volatility and changes to the macroeconomic environment. In addition, COVID-19 continues to affect the Issuer's employees, clients and communities with resultant impacts on the Issuer's operations, financial results and present and future risks to its business. For further details on these risks, refer to the Impact of pandemic risk factor under Macroeconomic risks in the Risk Factors section above.

Measures to contain the spread of COVID-19, including business closures, social distancing protocols, travel restrictions and school closures have been widespread. Although gradual and staged reopening plans have begun across several regions, these measures are continuing to have extensive implications for the global economy and related market functions, unemployment rates, and fiscal and monetary policies. The pandemic and the containment measures implemented in response to COVID-19 could also have longer-term effects on economic and commercial activity and consumer behaviour after the pandemic recedes and the measures are lifted. In conjunction with the COVID-19 pandemic containment measures, governments, regulatory bodies, central banks and private organizations around the globe have extended unprecedented relief programs and temporary measures to facilitate the continued operation of the global economy and financial system which are intended to provide support to individuals and businesses. Regulatory guidance from the Government of Canada and OSFI have also been implemented to facilitate the continued strength of the Canadian financial systems, including the expansion of existing facilities, the introduction of new funding programs and capital modifications to support the programs implemented in response to COVID-19. In addition, the Bank of Canada, the Federal Reserve Bank and other central banks have taken further steps to stimulate the economy through reductions in benchmark interest rates. Despite these measures and programs, the extent and duration of the impact of COVID-19 continues to be uncertain.

For further details on these measures and their impact on the Issuer, refer to Impact of pandemic risk factor under Macroeconomic risks in the Risk Factors section of this Registration Document and the Relief program sections, Liquidity and funding risk section and Capital management sections of the Issuers Second Quarter 2020 Report to Shareholders, which is incorporated by reference in this Registration Document.

In addition to the broad impacts of COVID-19 on the Issuer's employees, clients, communities and operations, COVID-19 has impacted the Issuer's financial results in the second quarter of 2020 across all of its business segments to varying degrees. The impact on the Issuer's consolidated results is primarily reflected in higher PCL and fair value changes due to the impact of market volatility, including movements in Other comprehensive income. Results across all of the Issuer's business segments in the second quarter of 2020 were also impacted by downstream implications from the changes in the macroeconomic environment, including lower interest rates, reduced consumer spending, widening of credit spreads, as well as other impacts, including increased client-driven volumes and higher operating costs. Notwithstanding these challenges, the Issuer's financial results and condition amid these challenges demonstrate the resilience of its capital and liquidity positions, which were bolstered by its position of strength at the time of entering this crisis and throughout the period.

Given the uncertainty in the extent and duration of the COVID-19 impacts on the economy and society as a whole, as well as the timeline of the transition to reopen the economy, the future impact on the Issuer's businesses and its financial results and condition remains uncertain.

In response to the COVID-19 pandemic, the Issuer has instituted various measures and programs to protect and support its employees, clients and communities, while also striving to ensure continued customer service to its clients, including the following:

- Promoting the safety and well-being of its employees by transitioning the majority of its workforce to work from home arrangements, offering paid leave days, additional compensation for those required to work on-site and 24/7 access to mental well-being support networks.

- Supporting its clients with targeted outreach and relief programs for its individual, small business, commercial and corporate clients such as payment deferrals, refinancing or restructuring and new loans as well as participation in various government relief programs. For further details, refer to the Relief programs section in the Second Quarter 2020 Report to Shareholders which is incorporated by reference in this Registration Document.

- In response to the needs of its communities, the Issuer has committed to support efforts focused on food security, mental health and strategic preparedness and response as well as the introduction of the Frontline Healthcare Workers Essential Care Program.

GENERAL INFORMATION

1. The Registration Document was authorized by (i) resolutions of the Board of Directors of the Issuer passed on February 29, 2012 amending and restating prior resolutions of the Board of the Issuer in respect of the Programme and Administrative Resolutions of the Board of Directors of the Issuer adopted on October 14, 2004 and most recently amended at a meeting held on October 19, 2017, and (ii) a resolution of the Board of Directors authorizing the issuance of subordinated indebtedness dated December 3, 2019 or any subsequent resolution replacing such resolution as is specified in the relevant Final Terms. The Issuer has obtained or will obtain from time to time all necessary consents, approvals and authorizations in connection with the Registration Document.

2. Other than the matters disclosed under the subsection entitled "Tax examinations and assessments" in Note 23 of the 2019 Audited Consolidated Financial Statements set out on page 198 of the Issuer's 2019 Annual Report, and the matters disclosed (with the exception of the subsection entitled "Other matters") in Note 26 of the 2019 Audited Consolidated Financial Statements set out on pages 201 and 202 of the Issuer's 2019 Annual Report and in each case incorporated by reference herein as updated by the litigation matters disclosed in Note 10 of the Second Quarter 2020 Unaudited Interim Condensed Consolidated Financial Statements set out on page 81 of the Issuer’s Second Quarter 2020 Report to Shareholders 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) during the twelve months prior to the date of this document which may have, or have had in the recent past, 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.

3. Since April 30, 2020, the last day of the financial period in respect of which the most recent unaudited interim condensed consolidated financial statements of the Issuer have been published, there has been no significant change in the financial performance or financial position of the Issuer and its subsidiaries taken as a whole. Except as disclosed in the section entitled “Significant developments: COVID-19” on pages 5 to 9 of the Second Quarter 2020 Report to Shareholders and as disclosed in “5. Macroeconomic Risks-Impact of Pandemic” on page 17 hereof, since October 31, 2019, the date of its last published audited annual consolidated financial statements, there has been no material adverse change in the prospects of the Issuer and its subsidiaries taken as a whole.

4. The independent auditors and independent registered public accounting firm of the Issuer are PricewaterhouseCoopers LLP (PwC) who are Chartered Professional Accountants, and Licensed Public Accountants and are subject to oversight by the Canadian Public Accounting Board and Public Company Accounting Oversight Board (United States). PwC is also registered in the Register of Third Country Auditors maintained by the Professional Oversight Board in the United Kingdom, the Irish Auditing and Accounting Supervisory Authority in Ireland and the Supervisory Board of Public Accounting in Sweden, all in accordance with the European Commission Decision of January 19, 2011 (Decision 2011/30/EU). PwC is independent of the Bank within the meaning of the Rules of Professional Conduct of the Chartered

Professional Accountants of Ontario and has no material interest in the Bank. The address for PwC is set out on the last page hereof.

5. The 2019 Audited Consolidated Financial Statements, prepared in accordance with IFRS, were audited in accordance with Canadian generally accepted auditing standards and the standards of the Public Company Accounting Oversight Board (United States) by PwC. PwC expressed an unmodified opinion on the audited consolidated financial statements for the year ended October 31, 2019 in the Independent Auditor's Report and the Report of Independent Registered Public Accounting Firm both dated December 3, 2019.

6. For so long as the Issuer may issue securities with respect to which this Registration Document forms part of a prospectus prepared by the Bank relating to such securities, copies of the following documents may be inspected free of charge at http://www.rbc.com, namely

   (i) the *Bank Act* (Canada) (being the charter of the Issuer) and by-laws of the Issuer;

   (ii) the latest Annual Report of the Issuer for the two most recently completed fiscal years, which includes audited annual consolidated financial statements of the Issuer, management's report on internal control over financial reporting and the auditor's reports;

   (iii) the most recent quarterly report including the unaudited interim condensed consolidated financial statements; and

   (iv) a copy of the Registration Document together with any supplement to the Registration Document.

In addition, copies of this Registration Document will be available for inspection on the website of the Regulatory News Service operated by the London Stock Exchange at http://www.londonstockexchange.com/exchange/news/market-news/market-newshome.html or the National Storage Mechanism at https://data.fca.org.uk/#/nsm/nationalstoragemechanism. Copies of the Bank's periodic financial reports may also be available for viewing under the name of the Issuer on the Canadian System for Electronic Document Analysis and Retrieval (SEDAR) at www.sedar.com (an internet based securities regulatory filing system). For the avoidance of doubt, unless specifically incorporated by reference into this Registration Document, the information contained on the websites referred to above is not incorporated in, and does not form part of, the Registration Document or a prospectus.

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