2ND SUPPLEMENTARY PROSPECTUS DATED JANUARY 21, 2021

ROYAL BANK OF CANADA

(a Canadian chartered bank)

Structured Securities Base Prospectus

Pursuant to the Programme for the Issuance of Securities

This Supplement (the "**Supplement**") to the original base prospectus dated July 17, 2020 (the "**Original Base Prospectus**"), as supplemented by the 1st Supplementary Prospectus dated September 4, 2020 (the Original Base Prospectus together with the 1st Supplementary Prospectus, the "**Base Prospectus**") which comprises a base prospectus under Article 8 of Regulation (EU) 2017/1129 (as amended, the "**Prospectus Regulation**") for Royal Bank of Canada ("**RBC**", the "**Bank**" or the "**Issuer**"), constitutes a supplementary prospectus in respect of the Base Prospectus for RBC for the purposes of Article 23.1 of the Prospectus Regulation and is prepared in connection with the Programme for the Issuance of Securities established by RBC.

The Issuer produced listing particulars dated July 17, 2020 as supplemented by the 1st Supplementary Prospectus dated September 4, 2020 (together, "**Listing Particulars**") for the purposes of listing on the Global Exchange Market of the Irish Stock Exchange plc trading as Euronext Dublin ("**Euronext Dublin**"). The Listing Particulars do not constitute a "prospectus" for the purposes of the Prospectus Regulation. This Supplement constitutes "supplementary listing particulars" for the purpose of listing on the Global Exchange Market of Euronext Dublin. These supplementary listing particulars have been approved by Euronext Dublin for the purposes of listing on its Global Exchange Market.

Such approval relates only to the Securities which are to be admitted to trading on the regulated market of Euronext Dublin or other regulated markets for the purposes of Directive 2014/65/EU (as amended) and/or which are to be offered to the public in any member state of the European Economic Area in circumstances that require the publication of a prospectus.

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

RBC accepts responsibility for the information contained in this Supplement. To the best of the knowledge of RBC, the information contained in this Supplement is in accordance with the facts and does not omit anything likely to affect the import of such information.

The purpose of this Supplement is:

(i) to incorporate by reference in the Base Prospectus (a) RBC's Annual Information Form dated December 1, 2020 (the "**2020 AIF**"); and (b) the following sections of

RBC's 2020 Annual Report (the "**2020 Annual Report**") for the year ended October 31, 2020:

(A) the Management's Discussion and Analysis on pages 14 through 116 (the "**2020 MD&A**");

(B) the audited annual consolidated financial statements, which comprise the consolidated balance sheets as of October 31, 2020 and 2019, 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 127 through 220, together with Management's Report on Internal Control over Financial Reporting as of October 31, 2020 on page 119, the Independent Auditor's Report and the Report of Independent Registered Public Accounting Firm, each dated December 1, 2020, on 120 through 123 and 124 through 126, respectively (the "**2020 Audited Consolidated Financial Statements**");

(C) the information about outstanding share capital in Note 20 on pages 201 through 203; and

(D) the information about tax examinations and assessments and legal and regulatory matters to which the Issuer and its Subsidiaries are or have been subject in Note 22 on page 207 and Note 25 on pages 210 through 211, respectively.

The remainder of the 2020 Annual Report is either not relevant for prospective investors or covered elsewhere in this Supplement and is not incorporated by reference.

(ii) following the publication of the 2020 Annual Report, to update the statements of no significant change and no material adverse change of the Issuer;

(iii) in light of the issuance of the 2020 MD&A (as defined below), amend and restate the risk factors in the Base Prospectus, as supplemented by the 1st Supplementary Prospectus dated September 4, 2020**;** and

(iv) following the publication of the 2020 Annual Report, to update paragraph 3 of the section entitled "General Information" in the Base Prospectus regarding governmental, legal or arbitration proceedings which may have, or have had, a significant effect on the financial position or profitability of the Issuer or of the Issuer and its subsidiaries taken as a whole.

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

Save as disclosed in this Supplement, the 2020 AIF or in the 2020 Annual Report incorporated by reference in the Base Prospectus by virtue of this Supplement, no significant new factor, material mistake or material inaccuracy relating to the information included in the Base Prospectus which may affect the assessment of Securities issued under the Programme has arisen or been noted, as the case may be, since the approval by the Central Bank of Ireland and Euronext Dublin of the 1st Supplementary Prospectus dated September 4, 2020.

This Supplement has been approved by the Central Bank of Ireland as Irish competent authority under the Prospectus Regulation. The Central Bank only approves this Supplement as meeting the standards of completeness, comprehensibility and consistency imposed by the Prospectus Regulation. Such approval should not be considered as an endorsement of the Bank as an issuer, nor as an endorsement by the CBI of the quality of Securities that may be issued under the Programme. Investors should make their own assessment as to the suitability of investing in such Securities.

In circumstances where Article 23(2) of the Prospectus Regulation applies, investors who have agreed to purchase or subscribe for securities before this Supplement is published have the right, exercisable before the end of the period of two working days beginning with the working day after the date on which this Supplement was published, to withdraw their acceptances. This right to withdraw will expire by close of business on January 25, 2021.

DOCUMENTS INCORPORATED BY REFERENCE

The following documents are by virtue of this Supplement incorporated in, and form part of, the Base Prospectus: (i) the 2020 AIF; and (ii) the 2020 Audited Consolidated Financial Statements and the 2020 MD&A set out on pages 14 through 220 (excluding page 117 of the same) of the 2020 Annual Report. The remainder of the 2020 Annual Report is either covered elsewhere in the Base Prospectus or is not relevant for investors.

The 2020 AIF, the 2020 Annual Report, which includes the 2020 Audited Consolidated Financial Statements and the 2020 MD&A, are available for viewing at the following links:

2020 AIF
https://www.rbc.com/investor-relations/_assets-custom/pdf/aif2020.pdf

2020 Annual Report
https://www.rbc.com/investor-relations/_assets-custom/pdf/ar_2020_e.pdf

For the avoidance of doubt, any document incorporated by reference in the 2020 AIF, the 2020 Audited Consolidated Financial Statements and the 2020 MD&A shall not form part of this Supplement.

The 2020 AIF, the 2020 Audited Consolidated Financial Statements and the 2020 MD&A and copies of this document approved by the Central Bank of Ireland are available for inspection from https://www.rbc.com/investor-relations/european-senior-notes-program.html. Certain of the documents incorporated by reference in the Base Prospectus or this Supplement may be viewed by accessing the Issuer's disclosure documents through the Internet at the Canadian System for Electronic Document Analysis and Retrieval at http://www.sedar.com (an internet based securities regulatory filing system). Please note that websites and URLs referred to herein do not form part of this Supplement or the Base Prospectus.

STATEMENT OF NO SIGNIFICANT CHANGE

Since October 31, 2020, the last day of the financial period in respect of which the most recent audited 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.

STATEMENT OF NO MATERIAL ADVERSE CHANGE

Since October 31, 2020, 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.

RISK FACTORS

By virtue of the Bank's Supplement dated January 20, 2021 (and as may have been amended under the 1st Supplementary Prospectus dated September 4, 2020), under the section "**RISK FACTORS**" on pages 1 to 76 of the Base Prospectus, under the heading entitled "**FACTORS WHICH ARE MATERIAL FOR THE PURPOSE OF ASSESSING THE RISK ASSOCIATED WITH THE ISSUER**" is deleted and replaced with the following:

"**1. Top and emerging risks**

An important component of the Issuer's risk management approach is to ensure that top 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 are intended to 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 supplementary internal guidance to support enterprise-wide identification and assessment of all material risks, including those that are not readily apparent.

Top and emerging risks encompass those that could materially impact the Issuer's financial results, reputation, business model, or strategy in the short to medium term, as well as those that could potentially impact the Issuer as the risks evolve.

In addition to the Impact of pandemic risk factor set out under "**5. Macroeconomic risks**" below which impacts multiple risk factors, the table below sets out the risk factors that the Issuer currently considers its top and emerging risks 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 & emerging risks	Description
1.1 Business and economic conditions	The Issuer's financial results may be affected to varying degrees by the general business and economic conditions in the geographic regions in which the Issuer operates. These conditions may include factors such as consumer saving and spending habits as well as consumer borrowing and repayment patterns, unemployment rates, the impact of containment measures associated with the COVID-19 pandemic or other health crises on businesses' operations, the level of business investment and overall business sentiment, the level of government spending as well as fiscal and monetary stimulus, the level of activity and volatility of the financial markets, and inflation. For example, economic downturns may result in higher unemployment rates and lower household incomes, lower corporate earnings, changes in business investment and consumer spending, and could adversely affect the Issuer's business, including but not limited to the demand for its loan and other products and result in lower earnings, including higher credit losses. The Issuer's financial results are also sensitive to changes in interest rates and to weaker investor confidence and market conditions, which may lead to lower client activity and unfavourable changes in earnings. Additional risks are emerging around how countries will seek to recoup the unprecedented levels of stimulus measures introduced in response to the COVID-19 pandemic and balance budgets in the future, and around the potential implications that a prolonged low interest rate environment will have, for example, on increasing wealth inequality and extended retirement ages, among others. For details on how the Issuer is managing its risks associated with the COVID-19 pandemic, refer to the Impact of pandemic risk factor below in "**5. Macroeconomic risks**".
1.2 Information technology and cyber risks	Information technology (IT) and cyber risks remain top risks, not only for the financial services sector, but for other industries worldwide. The Issuer continues to be subject to heightened risks in the form of cyberattacks, data breaches, cyber extortion and similar compromises, due to: (i) the size, scale, and global nature of the Issuer's operations; (ii) the Issuer's heavy reliance on the internet to conduct day-to-day business activities; (iii) the Issuer's intricate technological infrastructure; and (iv) 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. IT and cyber risks have increased during the

	COVID-19 pandemic, as increased malicious activities are creating more threats for cyberattacks including COVID-19 phishing emails, malware-embedded mobile apps that purport to track infection rates, and targeting of vulnerabilities in remote access platforms as many companies continue to operate with work from home arrangements. Resulting implications could include business interruptions, service disruptions, financial loss, theft of intellectual property and confidential information, litigation, enhanced regulatory attention and penalties, as well as reputational damage. Furthermore, the adoption of emerging technologies, such as cloud computing, AI and robotics, call for continued focus and investment to manage risks effectively. Not managing this risk effectively may have an adverse effect on the Issuer's financial performance and condition.
1.3 Canadian housing and household indebtedness	Canadian housing and household indebtedness risks are heightened as a result of a rise in unemployment and decline in labour participation. Interest rate cuts, government support programs and relief programs offered by financial institutions have helped households and may have contributed towards an increase in savings and a decrease in household indebtedness. However, concerns related to housing affordability in certain markets and levels of Canadian household debt that were already elevated before the additional challenges brought on by the COVID-19 pandemic could continue to rise if the COVID-19 pandemic worsens, if the period to economic recovery is prolonged or as relief programs expire, resulting in, among other things, higher credit losses for the Issuer. As at October 31, 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$556,330 million reflecting exposures at default. Additional risks are emerging with uncertainty surrounding the real estate rental market, changing consumer preferences and work arrangements, and the continued impact from industries significantly affected by the COVID-19 pandemic, all of which may have an impact on future real estate investment and demand. For example, uncertainties within the smaller size condo market have arisen during the COVID-19 pandemic, driven by a combination of a decline in short-term rentals and a shift in long-term rental preferences away from key metropolitan areas to adapt to ongoing work from home arrangements. Both factors have contributed to an increase in vacancy rates and a reduction in rental income in certain metropolitan markets which could impact sale prices into the future and result in higher household indebtedness, which could have negative credit implications for this lending portfolio.

	If this risk is not properly managed, it may have a negative impact on the Issuer's financial performance and condition and prospects.
1.4 Privacy, data and third-party related risks	The collection, use and sharing of data, as well as the management and governance of data, are increasingly important as the Issuer continues to invest in digital solutions and innovation, as well as, expanding its business activities. Data management is the risk of failing to manage information appropriately throughout its lifecycle due to inadequate processes and controls, resulting in legal or regulatory consequences, reputational damage or financial loss. In addition to the management and governance of data, its collection, use, and sharing also remain a top risk given the high value attributed to the Issuer's data. Resulting implications from failing to manage this risk could include financial loss, theft of intellectual property and confidential information, litigation, enhanced regulatory attention and penalties, as well as reputational damage. Privacy is the risk of improper creation or collection, use, disclosure, retention or destruction of information. Effective privacy and information management practices continue to grow in importance, as demonstrated by the continued development of complex regulations in the jurisdictions in which the Issuer operates and recent regulatory developments relating to data privacy. The Chief Privacy Office and the Chief Data Office partner with cross-functional teams to develop and implement enterprise-wide standards and practices that describe how data is used, protected, managed and governed. The Issuer's potential exposure to these risks also increases as the Issuer continues to partner with third-party service providers and adopt new technologies (e.g., cloud computing, AI and machine learning, etc.) and business models. Third-party risk is the risk of failure to effectively manage third parties which may expose the Issuer to service disruptions, regulatory action, financial loss, litigation or reputational damage. Privacy, data and third-party related risks have been heightened as the use of work from home arrangements have become common practice. As the majority of the Issuer's employees continue to work from home, it 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 its operations are being monitored for any impact on their ability to deliver services, including vendors of its third-party providers. Failure to properly 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.
1.5 Regulatory changes	The ongoing introduction of new or revised regulations will continue to lead to increasing focus across the organization on meeting additional regulatory requirements across the multiple jurisdictions in which the Issuer operates. See "Business segment results" on pages 26 to 48 of the 2020 MD&A incorporated by reference in the Base Prospectus for information on the Issuer's business segments and the jurisdictions in which they operate. Financial and other reforms that have come into effect or are coming into effect, across multiple jurisdictions, such as Canadian anti-money laundering regulations, the Interest rate benchmark reform, as well as data, privacy, consumer protection regulations, Canadian benchmark rate for qualifying insured mortgages and client focused reforms, continue to provide challenges and impact its operations and strategies and may negatively impact its financial performance and condition and prospects.
1.6 Environmental and social risk (including climate change)	Recent events have put organizations, including the Issuer, under increasing scrutiny to address social and racial inequality and human rights issues, and failure to do so may result in strategic, reputational and regulatory risks. Additional risks are emerging associated with climate change as it relates to extreme weather events and the global transition to a low carbon economy, which could result in a broad range of impacts including potential strategic, reputational, regulatory, compliance, operational and credit related risks for the Issuer and its clients. As concerns continue and global efforts to transition to a low carbon economy intensify, the Issuer's regulatory compliance and reputational risks are increasing. If not managed effectively, these risks could lead to negative reputational and financial impacts.
1.7 Digital disruption and innovation	The COVID-19 pandemic has changed the way consumers interact with financial services providers. Demand for digital banking services has increased, and while this represents an opportunity for the Issuer to leverage its technological advantage, the need to meet the rapidly evolving needs of clients and compete with non-traditional competitors has increased the Issuer's strategic and reputational risks. Additional risks also continue to emerge as demographic trends, evolving client expectations, the increased power to analyze data and the emergence of disruptors are

	creating competitive pressures across a number of sectors. Moreover, established technology companies, newer competitors, and regulatory changes continue to foster new business models that could challenge traditional banks and financial products. Finally, while the adoption of new technologies, such as AI and machine learning, presents opportunities for the Issuer, it could result in new and complex strategic, reputational, operational, regulatory and compliance risks that would need to be managed effectively and, if not, may adversely impact its financial performance and condition.
1.8 Culture and conduct risks	The Issuer's purpose, values and risk principles are key dimensions of the Issuer's culture. The Issuer demonstrates its culture through its conduct – the behaviours, judgments, decisions, and actions of the organization and its employees. Culture and conduct risks are considered top risks for the financial services industry due to the impact the Issuer's choices, behaviours, and overall risk governance can have on outcomes for its stakeholders. The Issuer embeds client considerations into its decision-making processes and aims to ensure focus on the fair treatment of clients, and continues to implement regulatory changes that align with this objective. The Issuer is responsive to evolving employee needs while expecting employees to always act with integrity. Canadian, U.S. and global regulators have been increasingly focused on conduct matters and risks, and heightened expectations generally from regulators could lead to investigations, remediation requirements, and higher compliance costs. While the Issuer takes numerous steps to continue to strengthen its conduct practices, and prevent and detect outcomes which could potentially harm clients, customers, employees or the integrity of the markets, such outcomes may not always be prevented or detected and if not, may negatively impact its financial position and performance as well as its prospects.

2. Transactional/Positional risks

2.1 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, associated credit risk and/or transactional risk. Credit risk includes counterparty credit risk arising 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 credit risk exposure as at October 31, 2020 was C$1,567,554 million. See the table "Credit Risk exposure by portfolio, sector and geography" on page 66 of the 2020 MD&A incorporated by reference in the Base Prospectus 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 its 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 2020 Audited Consolidated Financial Statements incorporated by reference into the Base Prospectus.

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 October 31, 2020, Canada represented approximately 68% of the Issuer's credit risk exposure while the United States represented 21%, Europe 8% and the Other international regions 3%. 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 63 to 65 of the 2020 MD&A incorporated by reference in the Base Prospectus 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, 2020, the Issuer's total provisions for credit losses (PCL) was C$4,351 million. See the Credit quality performance section on pages 70 and 71 of the 2020 MD&A incorporated by reference in the Base Prospectus

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

2.2 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 Issuer has adopted specific frameworks to manage market risk as described on pages 73 through 78 of the 2020 MD&A incorporated by reference in the Base Prospectus. Despite these frameworks, the Issuer remains exposed to the risk of loss a result of market risk which may negatively impact its financial performance and condition.

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.

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.

2.2.1 The key measures of market risk are as follows:

(a) FVTPL positions

As an element of the Enterprise Risk Appetite Framework, the Board approves the Issuer's overall market risk constraints. Group Risk Management creates and manages the control structure for FVTPL positions which ensures that business is conducted on a basis consistent with Board requirements. The Market and Trading Credit Risk function within GRM (GRM) is responsible for creating and managing the controls and governance procedures that ensure that risk taken is consistent with risk appetite constraints set by the Board. These controls include limits on probabilistic measures of potential loss such as Value-at-Risk, Stressed Value-at-Risk and Incremental Risk Charge as defined below: The market risk of trading portfolios is managed on a daily basis and controls include limits on probabilistic measures of potential loss such as Value-at–risk (VaR), Stressed Value-at-risk (SVaR) and Incremental Risk Charge (IRC) as defined below:

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 was updated in early Q3 2020 from the 2008/2009 period covering the Global Financial Crisis to a one-year period covering the market volatility observed during Q2 2020. 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.

IRC captures the risk of losses under default or rating changes for issuers of certain traded fixed income instruments. IRC is measured over a one year horizon at a 99.9% confidence level, and captures different liquidity horizons for instruments and concentrations in issuers under a constant level of risk assumption. Changes in measured risk levels are primarily associated with changes in inventory from the applicable fixed income trading portfolios.

See the table under "Market risk measures — FVTPL positions" on page 74 of the 2020 MD&A, incorporated by reference in the Base Prospectus for the quantitative impact of market risk on FVPTL positions for 2020.

(b) *Interest Rate Risk in the Banking Book (IRRBB) positions*

IRRBB activity arises primarily from traditional customer-originated banking products such as deposits and loans, and includes related hedges as well as the interest rate risk from securities held for liquidity management. Factors contributing to IRRBB include the mismatch between asset and liability repricing dates, relative changes in asset and liability rates in response to market rate scenarios, 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. IRRBB exposures are subject to limits and controls and are regularly measured and reported with independent oversight from Group Risk Management.

To monitor and control IRRBB, the Issuer assesses two primary metrics, net interest income (NII) and economic value of equity (EVE), under a range of market shocks, scenarios, and time horizons. The table on page 76 of the 2020 MD&A shows the potential before-tax impact of an immediate and sustained 100 basis points increase or decrease in interest rates on projected 12-month NII and EVE assuming no subsequent hedging. Rate floors are applied within the declining rates scenarios which prevent EVE valuation and NII simulation rate levels from falling below a minimum average level of negative 25 bps across major currencies. Interest rate risk measures are based upon interest rate exposures at a specific time, which over time, can change in response to business activities and management actions.

As at October 31, 2020, an immediate and sustained -100 bps shock would have had a negative impact to the Issuer's NII of C$621 million. An immediate and sustained +100 bps shock at the end of October 31, 2020 would have had a negative impact to the Issuer's EVE of C$1,756 million.

(c) *Investment securities carried at FVOCI*

The Issuer held $81.9 billion of investment securities carried at FVOCI as at October 31, 2020. The Issuer holds debt securities carried at FVOCI primarily as investments, as well as to manage liquidity risk and hedge interest rate risk in the Issuer's non-trading banking balance sheet. As at October 31, 2020, the Issuer's portfolio of investment securities carried at FVOCI is interest rate sensitive and would impact OCI by a pre-tax change in value of $7 million as measured by the change in the value of the securities for a one basis point parallel increase in yields. The portfolio also exposes the Issuer to credit spread risk of a pre-tax change in value of $20 million, as measured by the change in value for a one basis point widening of credit spreads. The value of the investment securities carried at FVOCI included in the Issuer's IRRBB measure as at October 31, 2020 was $79.0 billion. The Issuer's investment securities carried at FVOCI also include equity exposures of $0.5 billion as at October 31, 2020.

(d) *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.

For unhedged equity investments, when the Canadian dollar appreciates against other currencies, the unrealized translation losses on net foreign investments decreases Issuer shareholder equity through the other components of equity and decreases the translated value of the RWA of the foreign currency-denominated asset. The reverse is true when the Canadian dollar depreciates against other currencies. Consequently, the Issuer considers these impacts in selecting an appropriate level of its investments in foreign operations to be hedged.

2.3 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 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, 2020 was 145%. Despite the Issuer's liquidity risk management policy described on pages 78 through 88 of the 2020 MD&A incorporated by reference into the Base Prospectus, 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.

2.4 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 39 and 42 of the 2020 MD&A incorporated by reference into the Base Prospectus.

3. Operational risk

Operational risk is the risk of loss or harm resulting from people, inadequate or failed internal processes, controls 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 scrutiny and proceedings in the various jurisdictions where the Issuer operates.

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 the UK Prudential Regulation Authority (the "**PRA**").

As at October 31, 2020, RWA of the Issuer amounted to C$546,242 million, C$70,047 million of which was for operational risk (compared to C$448,821 million for credit risk and C$27,374 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 and business continuity.

Money laundering and terrorist financing risk is the risk that the Issuer's products and services are used to facilitate the laundering of proceeds of crime, including the financing of terrorist activity. The Issuer maintains an enterprise-wide program designed to deter, detect and report suspected money laundering and terrorist financing activities across its organization, while seeking to ensure 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 action, criminal prosecutions and reputational damage which could negatively impact its financial performance and condition.

Business continuity risk is the risk of being unable to maintain, continue or restore essential business operations during and/or after an event that prevents the Issuer from conducting business in the normal course. Exposure to disruptive operational events interrupts the continuity of its business operations and could negatively impact the Issuer's financial results, reputation, client outcomes and/or result in harm to the Issuer's employees. These operational events could result from the impact of severe weather, pandemics, failed processes, technology failures or cyber threats. The Issuer's risk-based enterprise-wide business continuity management program considers multiple scenarios to address the consequences of a disruption and its effects on the availability of the Issuer's people, processes, facilities, technology, and third-party arrangements. The Issuer's approach to business continuity management is outlined in policies and standards embedded across the organization and the related risks are regularly measured, monitored, reported and integrated in the Issuer's operational risk management and control framework.

4. Strategic risks

4.1 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 26 to 48 of the 2020 MD&A incorporated by reference into the Base Prospectus. 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.

4.2 Reputation risk

Reputation risk is the risk of an adverse impact on stakeholders' perception of the Issuer due to (i) the actions or inactions of the Issuer, its employees, third-party service providers, or clients, (ii) the perceived misalignment of these actions or inactions with stakeholder expectations of the Issuer, or (iii) negative 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 its 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, regulatory fines and penalties, restrictive agreements with regulators or prosecutors, or criminal prosecutions. 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 and maintain appropriate culture practices.

4.3 Legal and regulatory environment 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 laws and regulations, will negatively impact the way in which the Issuer operates, both in Canada and in the other jurisdictions in which the Issuer 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 or decrease the Issuer's costs, impact its profitability and increase the complexity of its operations. A summary of the additional regulatory changes instituted by governments globally and by OSFI during 2020 in response to the COVID-19 pandemic are included in the Significant developments: COVID-19, Liquidity and funding risk and Capital Management sections of the Issuer's 2020 Annual Report incorporated by reference into the Base Prospectus.

(i) 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 October 2020, the International Monetary Fund (IMF) projected global growth to decline -4.4% in calendar 2020, a moderate improvement from the -4.9% projection in June, yet well below October 2019 levels, as economic activity in advanced economies improved sooner than expected after initial containment measures were eased. The IMF projected global growth in 2021 of 5.2%, down from 5.4% projected in June, consistent with the expectations around persistent social distancing and continued containment measures. Estimates around the expected recovery beyond calendar 2020 remain uncertain, as timelines are largely dependent on the duration of the COVID-19 pandemic, including additional subsequent waves of the COVID-19 pandemic, and the effectiveness of the fiscal and monetary policy measures introduced in response to the COVID-19 pandemic. Trade policy also remains a source of uncertainty. While the Canada-United States-Mexico Agreement is now effective, reducing uncertainty about trade within North America, the post-pandemic future of global trade remains uncertain as countries may look to decrease reliance on the global supply chain. While the Issuer's diversified business model, as well as its product and geographic diversification, continue to help mitigate the risks posed by global uncertainty, global uncertainty and in particular its impact on the Canadian and U.S. economies may still have an adverse impact on the Issuer's financial performance and condition.

(ii) Canadian anti-money laundering (AML) regulations

The amendments to Canada's Proceeds of Crime (Money Laundering) and Terrorist Financing Act regulations will become effective June 2021. These amendments aim to improve the effectiveness of Canada's anti-money laundering and counterterrorism financing regime, and align compliance with international standards. The Issuer has assessed the requirements and does not anticipate significant challenges in meeting the requirements by the effective date.

(iii) 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. In addition to the U.S. and U.K., regulators and national central banks internationally, including the Bank of Canada (BoC), have warned the market they will need to be prepared for certain benchmark rates (including most tenors of LIBOR) to be discontinued at the end of calendar 2021. Derivatives, floating rate notes, loans and other financial contracts whose terms extend beyond the relevant discontinuation date, and that refer to certain benchmark rates (including LIBOR) as the reference rate, will be impacted. As a result, clearing agencies are moving towards new benchmark rates and the Issuer is working with them on the transition. For further details, refer to the Critical accounting policies and estimates section in the 2020 Annual Report incorporated by reference in the Base Prospectus.

(iv) 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. While the government has suspended its original effective date of April 6, 2020 until further notice due to the impact of the COVID-19 pandemic, 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 D-SIBs. The Issuer is currently assessing the impacts and the Issuer will continue to monitor for any further developments, including any future changes to the benchmark rate for uninsured mortgages.

(v) Client focused reforms

The Canadian securities administrator 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, extended from its previous effective date of December 31, 2020 due to the impact of the COVID-19 pandemic, 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 is continuing to evaluate the requirements and their impacts on the Issuer's businesses.

(vi) U.S. 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. In May 2020, the Office of the Comptroller of the Currency released revisions to the regulation implementing the Community Reinvestment Act (CRA), intended to increase bank lending, investment, and services in low- and moderate-income communities, which becomes effective on January 1, 2023. The Issuer will continue to monitor developments and any resulting implications for the Issuer.

(vii) U.K. and European regulatory reform

In addition to the implications from Brexit, other forthcoming regulatory developments include:

- Sustainability-Related Disclosures Regulation 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 processes. These requirements are effective on March 10, 2021 and the Issuer is currently assessing the impacts.

- The EU's Central Securities Depositary Regulation rules which are intended to increase discipline in the settlement of securities transactions. The EU has revised the effective date to February 2022, extended from its previous effective date of February 2021.

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 bank, and are often the result of inadequate or failed internal processes, controls, 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 extensive and evolving regulation by governmental agencies, supervisory authorities and self-regulatory organizations in Canada, the U.S., the U.K., Europe and other jurisdictions in which it operates. In recent years, such regulation has become increasingly extensive and complex. In addition, regulatory scrutiny and expectations in Canada, the U.S., the U.K., Europe and globally for large financial institutions, with respect to, among other things, governance, risk management practices and controls, conduct as well as the enforcement of regulatory compliance matters has intensified. Failure to comply with these requirements and expectations or resolve any identified deficiencies could result in increased regulatory oversight and restrictions. 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 scrutiny, examinations and proceedings, investigations, audits and requests for information by various governmental regulatory agencies and law enforcement authorities in various jurisdictions, and it anticipates that the Issuer's ongoing business activities will give rise to such matters in the future. The global scope of the bank's operations also means that a single issue may give rise to overlapping regulatory investigations, regulatory proceedings and or civil litigation claims in different jurisdictions. RBC can be subject to such proceedings due to alleged violations of law or, if determined by regulators, allegedly inadequate policies, procedures or remediation of deficiencies. 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 it operates, increasing its costs of compliance, or limiting its activities and ability to execute its strategic plans. Further, there is no assurance that the Issuer always will be, or be deemed to be, in compliance with laws, regulations or regulatory policies or expectations. Accordingly, it is possible that the Issuer could receive a judicial or regulatory enforcement judgment or decision that results in fines, damages, penalties, and other costs or injunctions, criminal convictions, or loss of licenses or registrations that would damage its 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 its results or could give rise to significant reputational damage, which in turn could impact its future business prospects.

The Issuer's Regulatory Compliance Management Framework outlines how the Issuer manages and mitigates the regulatory compliance risks associated with failing to comply with, or adapt to, current and changing laws and regulations in the jurisdictions in which it operates.

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, as well as prudential and other generally applicable non-financial requirements. Specific compliance policies, procedures and supporting frameworks have been developed to manage regulatory compliance risk.

4.4 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. There is intense competition for clients among financial services companies in the markets in which the Issuer operates. 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, its reputation, actions taken by its 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 its results.

5. Macroeconomic risks

5.1 Impact of pandemic risk factor

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 the Issuer's financial results and condition. The spread of the COVID-19 pandemic, given its severity and scale, continues to adversely affect the Issuer's business to varying degrees, some of the Issuer's clients and also continues to pose risks to the global economy. At the onset of the COVID-19 pandemic, governments and regulatory bodies in affected areas imposed a number of measures designed to contain the COVID-19 pandemic, including widespread business closures, social distancing protocols, travel restrictions, school closures, quarantines, and restrictions on gatherings and events. While a number of containment measures have been and continue to be gradually eased or lifted across some regions, additional safety precautions and operating protocols aimed at containing the spread of COVID-19 have been and continue to be instituted. In addition, the emergence of a second wave of the COVID-19 pandemic has led to the re-imposition of containment measures to varying degrees in some regions. As a result, containment measures continue to impact global economic activity, including the pace and magnitude of recovery as well as contributing to increased market volatility and changes to the macroeconomic environment. As the impacts of the COVID-19 pandemic continue to materialize, the prolonged effects of the disruption have had and continue to have adverse impacts on the Issuer's business strategies and initiatives, resulting in ongoing effects to 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 and continue to take actions in support of 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 have also been provided. For more information on these programs, refer to the Relief programs, Liquidity and funding risk and Capital management sections of the Issuer's 2020 Annual Report incorporated by reference into the Base Prospectus.

The Issuer is closely monitoring the potential continued effects and impacts of the COVID-19 pandemic, which continues to be a rapidly evolving situation. Uncertainty remains as to the full impacts of the COVID-19 pandemic 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 additional subsequent waves of the COVID-19 pandemic, as well as the effectiveness of actions and measures taken by government, monetary and regulatory authorities and other third parties. Despite recent positive trial results, the ongoing evolution of the development and distribution of an effective vaccine also continues to raise uncertainty. 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 conditions. The Issuer may also face increased operational and reputational risk and financial losses, including higher credit losses amongst other things, depending on the effectiveness of these client relief 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 the COVID-19 pandemic and will differ 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 some of the Issuer's clients and the way in which the Issuer conducts its business, including the closure of certain branches, prolonged duration of staff working from home, and changes to the Issuer's operations due to higher volumes of client requests, as well as disruptions to key suppliers of its goods and services. These factors have adversely impacted, and may continue to adversely impact, the Issuer's business operations and the quality and continuity of service to clients. To date, the Issuer has taken proactive measures through its business continuity plans to adapt to the ongoing work from home arrangements, carefully planning the return to premise for some of the Issuer's employees, and the Issuer's crisis management teams have increased their efforts to preserve the well-being of the Issuer's employees and the Issuer's ability to serve clients. Additionally, various temporary relief programs beyond the available government programs were launched to further support the Issuer's clients in financial need. For more information on the Issuer's relief programs, refer to the Relief programs section on pages 20 to 21 of the Issuer's 2020 Annual Report incorporated by reference in the Base Prospectus.

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

If the COVID-19 pandemic is prolonged, including the possibility of additional 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, and societal and business norms will be impacted following this COVID-19 pandemic. Unexpected developments in financial markets, regulatory environments, or consumer behaviour and confidence may also have adverse impacts on the Issuer's financial results and condition, business operations and reputation, for a substantial period of time. See also the impact of Covid-19 pandemic on other top and emerging risk factors, operational and reputational risks as well as credit and liquidity and funding risks described above.

5.2 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 due to an unforeseen event causing a substantive shock to the financial system with the likelihood of material damage to the economy, and which would result in financial, reputation, legal or other risks for the Issuer.

Systemic risk is considered to be the least controllable risk facing the Issuer, leading to increased vulnerabilities as experienced during the 2008 global financial crisis and the COVID-19 pandemic. The Issuer's ability to mitigate systemic risk when undertaking business activities is limited, other than through collaborative mechanisms between key industry participants, and, as appropriate, the public sector and regulators to reduce the frequency and impact of these risks. The two most significant measures in mitigating the impact of systemic risk are diversification and stress testing.

The Issuer's diversified business model, portfolios, products, activities and funding sources help mitigate the potential impacts from systemic risk as well as having established risk limits to ensure its portfolio is diversified, and concentration risk is reduced and remains within its risk appetite.

Stress testing involves consideration of the simultaneous movements in a number of risk factors. It is used to ensure the Issuer's business strategies and capital planning are robust by measuring the potential impacts of credit, market, liquidity, and operational risks on it, under adverse economic conditions. The Issuer's enterprise-wide stress testing program evaluates the potential effects of a set of specified changes in risk factors, corresponding to exceptional but plausible adverse economic and financial market events. These stress scenarios are evaluated across the organization, and results are integrated to develop an enterprise-wide view of the impacts on the Issuer's financial results and capital requirements. For further details on the Issuer's stress testing, refer to the Enterprise risk management section on pages 57 to 61 of the Issuer's 2020 MD&A incorporated by reference into the Base Prospectus.

The Issuer's financial results are affected by the 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. Given the importance of the Issuer's Canadian and U.S. operations, a continued economic downturn may largely affect its personal and business lending activities and may result in higher provisions for credit losses. Deterioration and uncertainty in global capital markets could result in continued high volatility that would impact results in Capital Markets, while in Wealth Management weaker market conditions could 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 its liquidity, resulting in increased funding costs and lower transaction volumes in Capital Markets and Investor & Treasury Services.

The Issuer's financial results are also sensitive to changes in interest rates. Central banks globally reduced benchmark interest rates in 2020, largely in response to the impact of the COVID-19 pandemic in an effort to provide support to maintain the resilience and stability of the financial systems. A continuing low interest rate environment in Canada, the U.S. and globally would result in net interest income continuing to be 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, leading to credit deterioration which might negatively impact the Issuer's financial results, particularly in some of its Personal & Commercial Banking and Wealth Management businesses.

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.

6.1 Government fiscal, monetary and other policies

The Issuer's businesses and earnings are affected by monetary policies that are adopted by the BoC, the Fed in the U.S., the ECB in the EU 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.

6.2 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 provide 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 structuring 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 policy 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.

6.3 Environmental and social risk

Environmental and social (E&S) risk is the potential for an E&S issue associated with the Issuer, a client, transaction, product, supplier or activity to have a negative impact on the Issuer's financial position, operations, legal and regulatory compliance, or reputation. 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 (including, but not limited to, Indigenous Peoples' rights) and consultation, and community engagement."

AMENDMENT TO STATEMENT REGARDING GOVERNMENTAL, LEGAL OR ARBITRATION PROCEEDINGS

Paragraph 3 of the section entitled "General Information" on page 686 of the Base Prospectus is hereby deleted in its entirety and replaced with the following:

"Other than the matters disclosed under the subsection entitled "Tax examinations and assessments" in Note 22 of the 2020 Audited Consolidated Financial Statements set out on page 207 of the Issuer's 2020 Annual Report, and the matters disclosed (with the exception of the subsection entitled "Other matters") in Note 25 of the 2020 Audited Consolidated Financial Statements set out on pages 210 and 211 of the Issuer's 2020 Annual Report and in each case incorporated by reference herein, there are no, nor have there been any governmental, legal or arbitration proceedings (including any such proceedings which are pending or threatened of which the Issuer is aware) which may have, or have had during the twelve months prior to the date of this document, individually or in the aggregate, a significant effect on the financial position or profitability of the Issuer or of the Issuer and its subsidiaries taken as a whole."