2ND SUPPLEMENTARY PROSPECTUS DATED JANUARY 5, 2022

ROYAL BANK OF CANADA
(a Canadian chartered bank)

€60,000,000,000
Global Covered Bond Programme
unconditionally and irrevocably guaranteed as to payments by

RBC COVERED BOND GUARANTOR LIMITED PARTNERSHIP
(a limited partnership formed under the laws of Ontario)

This Supplementary Prospectus (the "**2nd Supplementary Prospectus**") to the Base Prospectus dated July 23, 2021, as supplemented by the 1st Supplementary Prospectus dated August 31, 2021 (together, the "**Base Prospectus**"), and Admission Particulars for Royal Bank of Canada ("**RBC**" or the "**Issuer**") constitutes a supplementary prospectus in respect of the Base Prospectus for the Issuer for the purposes of Article 23.1 of the UK Prospectus Regulation and supplementary admission particulars in respect of the Admission Particulars for the purposes of the ISM Rulebook, and is prepared in connection with the €60,000,000,000 Global Covered Bond Programme of Royal Bank of Canada, unconditionally and irrevocably guaranteed as to payments by RBC Covered Bond Guarantor Limited Partnership (the "**Guarantor LP**"), established by RBC (the "**Programme**"). When used in this 2nd Supplementary Prospectus, "**UK Prospectus Regulation**" means Regulation (EU) 2017/1129 as it forms part of UK domestic law by virtue of the European Union (Withdrawal) Act 2018.

Terms defined in the Base Prospectus have the same meaning when used in this 2nd Supplementary Prospectus. This 2nd Supplementary Prospectus is supplemental to, and shall be read in conjunction with, the Base Prospectus.

RBC and the Guarantor LP accept responsibility for the information contained in this 2nd Supplementary Prospectus. To the best of the knowledge of RBC and the Guarantor LP, the information contained in this 2nd Supplementary Prospectus is in accordance with the facts and this 2nd Supplementary Prospectus makes no omission likely to affect its import.

The purpose of this 2nd Supplementary Prospectus is to (a) incorporate by reference in the Base Prospectus the Issuer's audited consolidated financial statements and management's discussion and analysis thereof, and the 2021 AIF (as defined below); (b) the Investor Report for the calculation date of November 30, 2021 (the "**Investor Report**"); (c) include a new statement in respect of no significant change and no material adverse change; (d) delete and replace the risk factors, which are incorporated by reference in the Base Prospectus via the Registration Document dated July 21, 2021 in light of the issuance of the 2021 MD&A (as defined below); and (e) update paragraph 3 of the section entitled "General Information and Recent Developments" in the Base Prospectus regarding governmental, legal or arbitration proceedings which may have, or have had, a significant effect on the financial position or profitability of the Issuer or of the Issuer and its subsidiaries taken as a whole.

To the extent that there is any inconsistency between (a) any statement in this 2nd Supplementary Prospectus or any statement incorporated by reference into the Base Prospectus by this 2nd Supplementary Prospectus; and (b) any other statement in, or incorporated by reference in, the Base Prospectus, the statements referenced in (a) above will prevail.

Save as disclosed in this 2nd Supplementary Prospectus, the 2021 AIF or the 2021 Annual Report (as defined below) incorporated by reference in the Base Prospectus by virtue of this 2nd Supplementary Prospectus, no significant new factor, material mistake or material inaccuracy relating to the information included in the Base Prospectus which may affect the assessment of Covered Bonds issued under the Programme has arisen or been noted, as the case may be, since approval by the Financial Conduct Authority (the "**FCA**") of the 1st Supplementary Prospectus dated August 31, 2021.

DOCUMENTS INCORPORATED BY REFERENCE

The following documents are, by virtue of this 2nd Supplementary Prospectus, incorporated in, and form part of, the Base Prospectus:

(a) RBC's Annual Information Form dated November 30, 2021 (the "**2021 AIF**");

(b) the following sections of RBC's 2021 Annual Report (the "**2021 Annual Report**") for the year ended October 31, 2021:

(i) the Management's Discussion and Analysis on pages 13 through 122 (the "**2021 MD&A**");

(ii) the audited annual consolidated financial statements, which comprise the consolidated balance sheets as of October 31, 2021 and 2020, 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 133 through 225, together with Management's Report on Internal Control over Financial Reporting as of October 31, 2021 on page 125, the Independent Auditor's Report and the Report of Independent Registered Public Accounting Firm, each dated November 30, 2021, on pages 126 through 129 and 130 through 132, respectively, (the "**2021 Audited Consolidated Financial Statements**"); and

(iii) 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 21 on page 212 and Note 24 on pages 215 and 216, respectively.

The remainder of the 2021 Annual Report is either not relevant for prospective investors or covered elsewhere in this 2nd Supplementary Prospectus and is not incorporated by reference; and

(c) the Investor Report.

The 2021 AIF, the 2021 Annual Report, which includes the 2021 Audited Consolidated Financial Statements and the 2021 MD&A are, by virtue of this 2nd Supplementary Prospectus, incorporated in, and form part of, the Base Prospectus. The remainder of the 2021 AIF and 2021 Annual Report is either covered elsewhere in the Base Prospectus or is not relevant for investors. The Investor Report is, by virtue of this 2nd Supplementary Prospectus, incorporated in, and forms part of, the Base Prospectus.

The 2021 AIF, the 2021 Annual Report, which includes the 2021 Audited Consolidated Financial Statements and the 2021 MD&A, and the Investor Report are available for viewing at:

2021 AIF
https://www.rbc.com/investor-relations/_assets-custom/pdf/aif2021.pdf

2021 Annual Report
https://www.rbc.com/investor-relations/_assets-custom/pdf/ar_2021_e.pdf

Investor Report for the calculation date of November 30, 2021
https://www.rbc.com/investor-relations/_assets-custom/pdf/112021cbreport.pdf

The 2021 AIF, 2021 Annual Report, which includes the 2021 Audited Consolidated Financial Statements and the 2021 MD&A, and the Investor Report have been filed with the National Storage Mechanism and are available for viewing at *https://data.fca.org.uk/#/nsm/nationalstoragemechanism,* and have been announced via the Regulatory News Service operated by the London Stock Exchange.

For the avoidance of doubt, any document incorporated by reference in the 2021 AIF, the 2021 Audited Consolidated Financial Statements and the 2021 MD&A, and the Investor Report shall not form part of this 2nd Supplementary Prospectus for the purposes of the UK Prospectus Regulation, or the ISM Rulebook except where such information or other documents are specifically incorporated by reference in or attached to this 2nd Supplementary Prospectus.

Copies of this 2nd Supplementary Prospectus, the Base Prospectus and the documents incorporated by reference in either of these can be (i) viewed on the Issuer's website maintained in respect of the Programme at *http://www.rbc.com/investorrelations/fixed_income/covered-bonds-terms.html*; (ii) obtained on written request and without charge from the Issuer at 20th Floor, 200 Bay Street, Toronto, Ontario, Canada M5J 2J5, Attention: Senior Vice President, Wholesale Finance and Investor Relations and from the office of the Issuing and Paying Agent, The Bank of New York Mellon, London Branch, One Canada Square, London E14 5AL, England, Attention: Manager, EMEA Corporate & Sovereign Department or at the offices of any other Paying Agent at the addresses specified at the end of the Base Prospectus; and (iii) viewed on the website of the Regulatory News Service operated by the London Stock Exchange at *http://www.londonstockexchange.com/exchange/news/market-news/market-news-home.html* under the name of the Issuer and the headline "Publication of Prospectus". Copies of the Issuer's periodic financial reporting can also be viewed by accessing the Issuer's disclosure documents through the Internet (i) on the Canadian System for Electronic Document Analysis and Retrieval at *http://www.SEDAR.com* (an internet based securities regulatory filing system), or (ii) at the SEC's website at *http://www.sec.gov*. Any websites included in this 2nd Supplementary Prospectus other than in respect of the information incorporated by reference are for information purposes only and do not form part of this 2nd Supplementary Prospectus or the Base Prospectus and the FCA has neither scrutinised or approved the information contained therein.

STATEMENT OF NO SIGNIFICANT CHANGE

There has been no significant change in the financial performance or financial position of the Issuer and its consolidated subsidiaries, including the Guarantor LP, taken as a whole since October 31, 2021, the last day of the financial period in respect of which the most recent audited consolidated financial statements of the Issuer have been prepared.

STATEMENT OF NO MATERIAL ADVERSE CHANGE

There has been no material adverse change in the prospects of the Issuer and its consolidated subsidiaries, including the Guarantor LP, taken as a whole since October 31, 2021, the last day of the financial period in respect of which the most recent audited consolidated financial statements of the Issuer have been prepared.

RISK FACTORS

The current risk factors under the section entitled "**Risks relating to the Issuer**" in the Registration Document which is incorporated by reference in the Base Prospectus via the Registration Document are deleted and replaced by the risks relating to the Issuer set out below. For the avoidance of doubt, all revisions to the risk factors noted herein are only for the purposes of the Base Prospectus and do not constitute a supplement to the Registration Document itself.

"**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 and addressed in the Issuer's risk frameworks and policies. 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, financial and operational resilience, reputation, business model, or strategy, 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 "**6. 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 this 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, spending habits and sentiment, as well as consumer borrowing and repayment patterns, unemployment rates, the differing paths to economic recovery among nations across the globe, particularly in light of the prolonged COVID-19 pandemic and range of containment measures, the level of business investment and overall business sentiment, the long-term impact from the pandemic on vulnerable sectors, the level of activity and volatility of the financial markets, supply chain challenges and labour shortages affecting certain sectors, inflation or possible stagflation, the level of government spending, monetary policies that are adopted by the Bank of Canada (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, and 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. Moreover, interest rate changes and actions taken by central banks to manage inflation or the broader economy would have implications for the Issuer. The Issuer's financial results are sensitive to changes in interest rates, as described in the Systemic risk section below. For example, a slowdown in economic growth or an economic downturn could adversely impact employment rates and household incomes, consumer spending, corporate earnings and business investment 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. Additional risks are emerging around governments' withdrawal of COVID-19 pandemic support measures, and how they will seek to recoup the unprecedented levels of support. This may include, for example, changes to tax policy to address fiscal capacity concerns and to balance budgets in the future. There are also emerging risks related to changing demographics as well as the potential implications that a prolonged low interest rate environment will have, for example, on increasing wealth inequality and delayed 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 "**6. 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. Cyber risks are the risks to the business associated with cyber attacks initiated to disrupt or disable the Issuer's operations or to expose or damage data. The Issuer continues to be subject to heightened risks in the form of cyber-attacks, 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. Ransomware threats are growing in sophistication and being used to launch major supply chain attacks. 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 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. Environmental and social risk (including climate change)	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 community engagement. The Issuer, like other organizations, is increasingly under scrutiny to address social and racial inequality and human rights issues, and failure to do so may result in strategic, reputational and regulatory risks. Risks associated with climate change are evolving as it relates to the global transition to a net-zero economy and physical climate risks (e.g., extreme weather events), 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.

	If not managed effectively, these riks could lead to negative reputational and and financial impacts.
1.4 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.
1.5 Canadian housing and household indebtedness	Canadian housing and household indebtedness risks remain elevated, but have moderated as restrictions related to the COVID-19 pandemic have eased and employment has rebounded. However, the unemployment rate remains above pre-pandemic levels. Concerns related to housing affordability in certain markets and levels of mortgage-related Canadian household debt – which were already elevated before and during the COVID-19 pandemic – could escalate if additional waves of the COVID-19 pandemic emerge, if the period of economic recovery is prolonged, or if the lending environment changes, potentially resulting in, among other things, higher credit losses. While real estate rental activity has rebounded in certain markets, changing consumer preferences and work arrangements, and the impact from possible future waves of the COVID-19 pandemic, may continue to have an impact on future real estate investment and demand. As at October 31, 2021, 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$685,344 million reflecting exposure at default. If this risk is not properly managed, it may have a negative impact on the Issuer's financial performance, condition and prospects.
1.6 Geopolitical uncertainty	Persistent trade tensions, supply chain disruptions, policy changes, COVID-19 vaccine nationalism and vaccine diplomacy continue to impact global economic growth prospects and market sentiment. The Canadian economy is vulnerable to continued trade tensions given the country's trading relationships with the U.S. and China. Tensions remain elevated between China and the U.S. and its allies over a number of issues, including trade, technology, human rights, Hong Kong, Macau, and Taiwan. Tensions between China and its neighbours over territorial claims add further global

	and economic uncertainty. In addition, tensions with Russia remain high over allegations of cyber-attacks, election interference, adventurism, and the mistreatment of anti-corruption and pro-democracy activists. Other geopolitical tensions could also add to economic and market uncertainties. More broadly, the post-pandemic future of global trade remains uncertain, as countries look to decrease reliance on the global supply chain. Increased protectionism and economic nationalism could reshape global alliances as a steady COVID-19 vaccine supply and the supply of other critical goods of economic and national importance (e.g., semiconductors) remain one of the top priorities of governments. Failure to effectively manage this risk may adversely impact the Issuer's financial performance, position and prospects.
1.7 Privacy, data and third-party related risks	The protection and responsible use of personal information are critical to maintaining the Issuer's clients' trust. Privacy risk is the risk of improper creation or collection, use, disclosure, retention or destruction of information. In addition, the management and governance of the Issuer's data also remains a top risk given the high value attributed to its data for the insights it can generate for clients and communities. Data management risk 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. Resulting implications from failing to manage data and privacy risks could include financial loss, theft of intellectual property and/or confidential information, litigation, enhanced regulatory attention and penalties, as well as reputational damage. 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. The Issuer's potential exposure to these risks increases as it continues to partner with third-party service providers and adopt new business models and technologies (e.g., cloud computing, AI and machine learning). Attackers gravitate towards vulnerabilities in an ecosystem, and the weakest link in the supply chain can be a supplier or third-party service provider, who may not have sufficiently robust controls. 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 remains common practice. Third-party providers critical to the Issuer's operations are monitored for any impact on their ability to deliver services, including vendors of its third-party providers. 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. Failure to properly onboard and manage service providers may expose the Issuer to service disruption, financial loss and other risk that may negatively impact its financial performance and condition.

1.8 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 24 to 47 of the 2021 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 or are coming into effect, across multiple jurisdictions, such as Canadian anti-money laundering regulations, the interest rate benchmark reform, as well as privacy, climate and consumer protection, continue to impact the Issuer's operations and strategies and may negatively impact its financial performance, condition and prospects.
1.9 Culture and conduct risks	The Issuer's purpose, values and risk principles are key dimensions of its 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, which comprise the Issuer's wholesale portfolio and residential mortgages, personal loans, credit cards, and small business loans, which comprise the Issuer's retail 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 derivative amounts. The Issuer's gross credit risk exposure as at October 31, 2021 was C$1,733,146 million. See the table "Credit Risk exposure by portfolio, sector and geography" on page 66 of the 2021 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 fulfill 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 2021 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., loans 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, 2021, Canada represented approximately 63% of the Issuer's credit risk exposure while the U.S. represented 21%, Europe 11% and the Other international regions 5%. Accordingly, deterioration in general business and economic conditions in Canada and the U.S. 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 result in an increase in credit losses.

The Issuer has put in place specific frameworks to manage credit risk. See pages 60 to 72 of the 2021 MD&A incorporated by reference in the Base Prospectus for more information. Notwithstanding such frameworks, the Issuer recorded provisions for credit losses ("**PCL**") to recognise estimated credit losses on all financial assets, except for financial assets classified or designated as fair value through profit or loss ("**FVTPL**") and equity securities designated as FVOCI, which are not subject to impairment assessment. For the year ended October 31, 2021, the Issuer's total PCL was C$(753) million. See the Credit quality performance section on pages 70 to 72 of the 2021 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 72 to 78 of the 2021 MD&A incorporated by reference in the Base Prospectus. Despite these frameworks, the Issuer remains exposed to the risk of loss as 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 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

FVTPL is an accounting concept which indicates that the assets and liabilities are measured at fair value on the balance sheet. The measurement is generally used for financial instruments that are part of the Issuer's trading activities (purchased with intent to sell or repurchase) and are classified as FVTPL, but can be elected for financial assets if it eliminates or significantly reduces a measurement or recognition inconsistency that would otherwise arise from measuring assets or liabilities, or recognising related gains and losses on a different basis (an accounting mismatch).

The fair value option can be elected for financial liabilities if: (i) the election eliminates an accounting mismatch; (ii) the financial liability is part of a portfolio that is managed on a fair value basis, in accordance with a documented risk management or investment strategy; or (iii) there is an embedded derivative in the financial or non-financial host contract and the derivative is not closely related to the host contract. These instruments cannot be reclassified out of the FVTPL category while they are held or issued (i.e. designated as FVTPL). Any loss or gain in the fair value of these instruments between quarterly balance sheet dates due to changes in market prices and rates are accounted for as losses or gains, and so directly impact the Issuer's financial performance and condition. Financial liabilities designated as FVTPL are recorded at fair value and fair value changes attributable to changes in the Issuer's own credit risk are recorded in OCI. See "Fair value of financial instruments" on page 110 and "Securities" on page 141 of the 2021 Annual Report incorporated by reference in the Base Prospectus for more information on how fair value is determined.

As an element of the Enterprise Risk Appetite Framework, the Board approves the Issuer's overall market risk constraints. Group Risk Management ("**GRM**") 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 Counterparty Credit Risk function within 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 (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 is 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 73 of the 2021 MD&A, incorporated by reference in the Base Prospectus, for the quantitative impact of market risk on FVTPL positions for the year ended October 31, 2021.

(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 purposes. Factors contributing to IRRBB include mismatches between asset and liability repricing dates, relative changes in asset and liability rates in response to market rate scenarios, and other product features affecting the expected timing of cash flows, such as options to pre-pay loans or redeem term deposits prior to contractual maturity. IRRBB sensitivities are regularly measured and reported, and subject to limits and controls with independent oversight from Group Risk Management.

To monitor and control IRRBB, the Issuer assesses two primary metrics, Net Interest Income ("**NII**") risk and Economic Value of Equity ("**EVE**") risk, under a range of market shocks, scenarios, and time horizons. The table on page 75 of the 2021 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 on current on and off-balance sheet positions which can change over time in response to business activity and management actions.

As at October 31, 2021, an immediate and sustained -100 bps shock would have had a negative impact to the Issuer's NII of C$921 million. An immediate and sustained +100 bps shock at the end of October 31, 2021 would have had a negative impact to the Issuer's EVE of C$2,009 million.

(c) Investment securities carried at FVOCI

The Issuer held C$78 billion of investment securities carried at FVOCI as at October 31, 2021. 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, 2021, 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 C$8 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 C$14 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, 2021 was C$75 billion. The Issuer's investment securities carried at FVOCI also include equity exposures of C$1 billion as at October 31, 2021.

(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 the Issuer's 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. 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 ("**BCBS**") and Office of the Superintendent of Financial Institutions ("**OSFI**") regulatory minimum coverage level for LCR is 100%. The Issuer's average LCR for the quarter ended October 31, 2021 was 123%, which translates into a surplus of approximately C$67 billion. Net Stable Funding Ratio ("**NSFR**") is a Basel III metric that measures the sufficiency of available stable funding relative to the amount of required stable funding. The BCBS and OSFI regulatory minimum coverage level for NSFR is 100%. The Issuer's NSFR as at October 31, 2021 was 116%, which translates into a surplus of approximately C$114.0 billion. Despite the Issuer's liquidity risk management policy described on pages 78 through 90 of the 2021 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. The Issuer's five insurance sub-risks are: morbidity, mortality, longevity, policyholder behavior (lapse), 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 38 to 41 of the 2021 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 UK Financial Conduct Authority (the “**FCA**”) or as a supervised firm regulated by the FCA or the UK Prudential Regulation Authority (the “**PRA**”).

As at October 31, 2021, the Issuer’s total RWA amounted to C$552,541 million, C$73,593 million of which was for operational risk (compared to C$444,142 million for credit risk and C$34,806 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 also 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 the Issuer’s 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.

4. *Regulatory compliance risk and legal and regulatory environment*

4.1 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 large complex financial institutions, such as the Issuer, and are often the result of inadequate or failed internal processes, controls, people or systems. The Issuer currently is, and may be at any given time, subject to a number of legal and regulatory proceedings and subject to numerous governmental and regulatory examinations, investigations and other inquiries.

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. Such regulation continues to become increasingly extensive and complex. In addition, regulatory scrutiny and expectations in Canada, the U.S., the U.K., Europe and other jurisdictions for large financial institutions with respect to, among other things, governance, risk management practices and controls, and conduct, as well as the enforcement of regulatory compliance matters, has intensified. Failure to comply with these regulatory requirements and expectations or to resolve any identified deficiencies could result in increased regulatory oversight and restrictions. Resolution of such matters can also result in the payment of substantial penalties, agreements with respect to future operation of their business, actions with respect to relevant personnel, admission of wrongdoing, 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 the Issuer anticipates that its ongoing business activities will give rise to such matters in the future. The global scope of the Issuer'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. The Issuer can be subject to such proceedings due to alleged violations of law or, if determined by regulators, allegedly inadequate policies, procedures, controls 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. In addition, the severity of the remedies sought in legal and regulatory proceedings to which the Issuer is subject have increased. 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 significant 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. The Issuer is also 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 it 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.

4.2 *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 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 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 in response to the COVID-19 pandemic are included in the Impact of COVID-19 pandemic and Capital management sections of the Issuer's 2021 Annual Report incorporated by reference in the Base Prospectus.

(i) Global uncertainty

Significant uncertainty about the impacts of the COVID-19 pandemic, supply chain disruptions, trade policy and geopolitical tensions continue to pose risks to the global economic outlook. In October 2021, the International Monetary Fund (IMF) projected global growth of 5.9% in calendar 2021, down 0.1% from its July forecast, reflecting supply chain disruptions in advanced economies and limited vaccine access in developing countries. Despite largely positive economic developments throughout the year, uncertainty remains regarding new variants of COVID-19 and the potential impacts of uneven vaccine access and vaccine hesitancy. Trade policy also remains a source of global uncertainty as countries consider ways to incorporate climate policy into trade policy and the U.K. continues to develop its post-Brexit international trade policies. Finally, global financial markets remain vulnerable to geopolitical tensions, such as those between the U.S. and China, many of which center around trade and technology. While the Issuer's diversified business model, as well as its product and geographic diversification, continue to help mitigate the risk posed by global uncertainty and in particular its effect on the Canadian and U.S. economies, it may still have an adverse impact on the Issuer's financial performance and condition.

(ii) Consumer protection

On August 18, 2021, the Canadian federal government published the Financial Consumer Protection Framework Regulations which are the underlying regulations to support the new Financial Consumer Protection Framework (FCPF). The FCPF encompasses a number of new consumer protection requirements, including complaint handling, access to banking services, and disclosures. The Issuer will be required to comply with the regulations by June 30, 2022 and it expects to be in compliance by the effective date.

(iii) Minimum qualifying rates for insured and uninsured mortgages in Canada

Effective June 1, 2021, the proposed minimum qualifying rate for uninsured mortgages is the greater of the mortgage contract rate plus 2% or 5.25%. OSFI also announced that it will review and communicate the qualifying rate at a minimum annually, every December. The Department of Finance Canada, who is responsible for setting the benchmark rate for qualifying insured mortgages, also announced that it would align the rate for insured mortgages with the rate set by OSFI for uninsured mortgages and that this new rate would apply to insured mortgages approved on June 1, 2021 or later. The minimum qualifying rate for insured mortgages will be subject to review and periodic adjustment.

(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 away from LIBOR and certain other benchmark rates to alternative benchmark rates (ABRs) that are based on actual overnight transactions. On March 5, 2021, the FCA, the regulator of the ICE Benchmark Administration (IBA) which administers LIBOR, announced the permanent cessation or loss of representativeness of all 35 LIBOR benchmark settings currently published by the IBA as of December 31, 2021 or June 30, 2023.

Details related to certain settings to which the Issuer is exposed are noted below.

- Publication of the 1-week and 2-month USD LIBOR settings will cease immediately after December 31, 2021. Publication of the overnight and 12-month USD LIBOR settings will cease immediately after June 30, 2023, while the 1-month, 3-month and 6-month USD LIBOR settings will no longer be representative of the underlying market and economic reality they are intended to measure after June 30, 2023. The FCA may consult on requiring the IBA to publish 1-month, 3-month and 6-month USD LIBOR settings after the end of June 2023 on a non-representative "synthetic" basis.

- Publication of the overnight, 1-week, 2-month and 12-month GBP LIBOR settings will cease immediately after December 31, 2021, while the 1-month, 3-month and 6-month GBP LIBOR settings will no longer be representative of the underlying market and economic reality they are intended to measure after December 31, 2021. The FCA will require the IBA to continue to publish 1, 3 and 6 month GBP LIBOR settings until the end of 2022 on a non-representative "synthetic" basis.

The FCA announcement engaged contractual triggers for the calculation and future application of fallback provisions related to the Issuer's LIBOR linked products, including certain loans, bonds and derivatives.

Additionally, on June 22, 2021, OSFI issued a letter setting out their expectation that Federally Regulated Financial Institutions (FRFIs) will stop using USD LIBOR settings as soon as possible and will not enter into new transactions referencing these rates after December 31, 2021. OSFI further expects FRFIs to prioritize system and model updates to accommodate ABRs by December 31, 2021, and be fully prepared to transact in ABRs that are available in markets in which the FRFI operates by December 31, 2021.

To manage its transition away from LIBOR, the issuer has implemented a comprehensive enterprise-wide program and governance structure that addresses the key areas of impact including contract remediation, funding and liquidity planning, risk management, financial reporting and valuation, systems, processes and client education and communication. Transition activities are focused on two broad streams of work: (i) developing new ABR linked products, and (ii) conversion of existing LIBOR based contracts to ABRs. The Issuer's program timelines are ultimately dependent on broader market acceptance of products that reference the new ABRs and the Issuer's clients' readiness and ability to adopt the replacement products. Significant matters that the Issuer continues to evaluate include client product offerings, short and long-term funding strategies, and its hedging programs. The Issuer continues to work towards the recommended target dates for the cessation of LIBOR-based products provided by its regulators and is on track with its transition activities to move to ABRs. For further details, refer to the Critical accounting policies and estimates section in the Issuer's 2021 Annual Report and Note 2 of its 2021 Annual Consolidated Financial Statements.

(v) Client focused reforms

The Canadian Securities Administrators 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 are coming into effect in two phases: the first phase relating to conflicts of interest and the related disclosure requirements came into effect on June 30, 2021, and the second phase relating to the remaining requirements comes into effect on December 31, 2021. The requirements primarily impact the Issuer's Personal & Commercial

Banking and Wealth Management platforms. The Issuer is well positioned to comply with the requirements.

(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. On January 1, 2021, the U.S. Congress enacted the Anti-Money Laundering Act of 2020 (AMLA) which represents a comprehensive set of reforms to U.S. anti-money laundering laws. Regulations pertaining to this legislation have yet to be issued; the extent, timing and impact of which are unknown at this time. The Issuer will continue to monitor developments and any resulting implications for it.

(vii) U.K. and European regulatory reform

EU Sustainability-Related Disclosures Regulation requires 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 were effective on March 10, 2021 and to date there has been no material impact on the Issuer; however, the Issuer will continue to monitor future guidance and the impact, if any, on it.

All the regulations noted above 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.

5. Strategic risks

5.1 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 24 to 47 of the 2021 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.

5.2 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.

5.3 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.

6. Macroeconomic risks

6.1 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 it operates, and on its financial results and condition. The spread of the COVID-19 pandemic, given its severity and scale, has affected and may continue to adversely affect the Issuer's business and its clients to varying degrees, 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 rising vaccination rates have supported a substantial or full easing of containment measures in a number of regions, the extent of containment measures and progress towards reopening continues to vary and fluctuate across different regions. As a result, containment measures continue to impact the macroeconomic environment and global economic activity, including the pace and magnitude of recovery. As the impacts of the COVID-19 pandemic continue to evolve, the prolonged effects of the disruption continue to have an impact on the Issuer's business strategies and initiatives, and could adversely affect its financial results.

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. The Issuer expects that these governments, monetary authorities, regulators, and institutions will continue to assess the need for these programs and measures. Additionally, the Issuer implemented various temporary relief programs beyond the available government programs to further support its clients in financial need. Although the temporary relief programs have largely concluded, the Issuer has assessed and will continue to assess the needs of each individual client and continue to provide support to clients on a case by case basis. For more information on these programs, refer to the Relief programs, Liquidity and funding risk and Capital management sections of the Issuer's 2021 MD&A.

Uncertainty remains as to the full impacts of the COVID-19 pandemic on the global economy, financial markets, and the Issuer, including on its 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 positive developments, uncertainty remains regarding new variants of COVID-19, the potential impact of vaccine hesitancy, and global vaccine supply and availability, including uneven vaccine access.

The COVID-19 pandemic has and may continue to result in disruptions to some of the Issuer's clients and the way in which it conducts its business and could continue to adversely impact its business operations and the quality and continuity of service to clients. The Issuer has taken proactive measures through its business continuity plans to adapt to the ongoing work from home arrangements and carefully plan the return to premise for some of its employees, and are maintaining its focus on the well-being of its employees and its ability to serve clients.

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, possibly arising from support programs coming to an end, on some of its clients. This, in conjunction with operational constraints due to the impacts of social distancing, could lead to increased pressure on the financial performance of some of the Issuer's clients, which, to some extent, creates uncertainty around potential future expected credit losses for the Issuer.

If the COVID-19 pandemic is further 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 could potentially result in volatility and declines in financial markets. Moreover, it remains uncertain how the macroeconomic environment, and societal and business norms will be impacted following the 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.

The Issuer is closely monitoring the potential continued effects and impacts of the COVID-19 pandemic, which continues to be an evolving situation.

In virtually all aspects of its operations, the Issuer's view of risks is not static as its business activities expose it to a wide variety of risks. Consistent with its Enterprise Risk Management Framework (ERMF), the Issuer actively manages its risks to help protect and enable its businesses. Additionally, the Issuer continues to evaluate the impacts that the COVID-19 pandemic has had and continues to have on its business, including the impact on its top and emerging risks, operational and reputational risks as well as credit, market and liquidity and funding risks. For further details on the Issuer's top and emerging and operational risks, refer to the risk sections above.

6.2 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 56 and 57 of the Issuer’s 2021 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. With interest rates remaining low throughout 2021, and expected to continue to remain low into fiscal 2022, the Issuer could see net interest income continuing to be unfavourably impacted by spread compression across many of its businesses while an increase in interest rates would benefit its businesses. However, a significant increase in interest rates could also adversely impact household balance sheets, leading to credit deterioration which could negatively impact the Issuer’s financial results, particularly in some of its Personal & Commercial Banking and Wealth Management businesses.

7. 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.

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 reputation and its relationship with clients, shareholders, and regulators.

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 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 in accordance with applicable transfer pricing requirements;
- 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."

AMENDMENT TO STATEMENT REGARDING GOVERNMENTAL, LEGAL OR ARBITRATION PROCEEDINGS

Paragraph 3 of the section entitled "General Information and Recent Developments" on page 310 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 21 of the 2021 Audited Consolidated Financial Statements set out on page 212 of the Issuer's 2021 Annual Report, and the matters disclosed (with the exception of the subsection entitled "Other matters") in

Note 24 of the 2021 Audited Consolidated Financial Statements set out on pages 215 and 216 of the Issuer's 2021 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) during the twelve months prior to the date of this document which may have, or have had during 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 or the Guarantor LP."