

**Pricing Supplement to Short Form Base Shelf Prospectus dated March 25, 2022,
the Prospectus Supplement thereto dated March 28, 2022, as supplemented November 11, 2022 and
the Prospectus Supplement thereto dated March 28, 2022, as supplemented November 11, 2022**

No securities regulatory authority has expressed an opinion about these securities and it is an offence to claim otherwise.

This pricing supplement together with the short form base shelf prospectus dated March 25, 2022, the prospectus supplement dated March 28, 2022 and the prospectus supplement dated March 28, 2022, to which it relates, as amended or supplemented, and each document incorporated by reference into such prospectus, constitutes a public offering of these securities only in those jurisdictions where they may be lawfully offered for sale and therein only by persons permitted to sell such securities.

The securities to be issued hereunder have not been, and will not be, registered under the United States Securities Act of 1933, as amended and, subject to certain exceptions, may not be offered, sold or delivered, directly or indirectly, in the United States of America or for the account or benefit of U.S. persons.



Royal Bank of Canada

November 15, 2022

Senior Note Program

Index Linked Securities

Maximum \$20,000,000 (200,000 Securities)

RBC LiONS™ Solactive Canada Bank 40 AR Index Linked Fixed

8.15% Securities (CAD), Series 21, F-Class

Due December 16, 2027

Non-Principal Protected Securities

Royal Bank of Canada (the “**Bank**”) is offering up to \$20,000,000 of RBC LiONS™ Solactive Canada Bank 40 AR Index Linked Fixed 8.15% Securities (CAD), Series 21, F-Class (which we refer to as the “**Securities**” for the purpose of this pricing supplement only and not for the purpose of the “base shelf prospectus” as defined below), designed for investors who are prepared and can afford to take the risk that they will lose substantially all of the Principal Amount (defined herein) of their investment because they believe that the Closing Level (defined herein) of the Solactive Canada Bank 40 AR Index (the “**Underlying Index**”), an adjusted return index that aims to track the gross total return performance of the Solactive Canada Bank TR Index (the “**Target Index**”), subject to a reduction of a synthetic dividend of 40 index points per annum calculated daily in arrears (the “**Adjusted Return Factor**”), will be greater than or equal to the Protection Barrier Level (defined herein) on the Final Valuation Date (defined herein). Payment at maturity will be based on the performance of the Underlying Index. **For the avoidance of doubt, the payment at maturity on the Securities is linked to the Underlying Index and is not linked to the Target Index.** Holders of the Securities will also receive Interest Payments (defined herein) payable monthly on each Interest Payment Date (defined herein), each at a fixed amount of \$0.6792 per Security. Such Interest Payments are not contingent on or related to the performance of the Underlying Index. The return on the Securities is capped; even if the Final Index Level (defined herein) is greater than or equal to the Protection Barrier Level, the maximum return on the Securities would be equal to \$40.75 per Security.

The initial estimated value of the Securities as of November 11, 2022 was \$98.92 per Security, which is less than the price to the public and is not an indication of the actual profit to the Bank or its affiliates. The actual value of the Securities at any time will reflect many factors, cannot be predicted with accuracy, and may be less than this amount. We describe our determination of the initial estimated value in more detail below. See “Risk Factors” and “Preparation of Initial Estimated Value”.

The Securities are described in this pricing supplement delivered together with our short form base shelf prospectus dated March 25, 2022 (the “**base shelf prospectus**”), the prospectus supplement establishing our Senior Note Program dated March 28, 2022, as supplemented November 11, 2022 (the “**program supplement**”) and a prospectus supplement which generally describes index linked securities that we may offer under our Senior Note Program dated March 28, 2022, as supplemented November 11, 2022 (the “**product supplement**”).

The Securities are not fixed income securities and are not designed to be alternatives to fixed income or money market instruments. The Securities are structured products that possess downside risk.

The Securities will not constitute deposits insured under the *Canada Deposit Insurance Corporation Act*.

An investment in the Securities involves risks. The Securities are linked to the Underlying Index which reflects (i) the applicable price changes of the constituent securities of the Target Index and any dividends and distributions paid in respect of such securities, without deduction of any withholding tax or other amounts accruing thereon to which an investor holding the constituent securities of the Target Index would typically be exposed, less (ii) the Adjusted Return Factor. An investment in the Securities is not the same as a direct investment in the securities that comprise the Target Index and investors have no rights with respect to the securities underlying such index. The return on the Securities will not reflect the total return that an investor would receive if such investor owned the securities that comprise the Target Index. The Securities are considered to be “specified derivatives” under applicable Canadian securities laws. If you purchase Securities, you will be exposed to changes in the level of the Underlying Index and fluctuations in interest rates, among other factors. Index levels are volatile and an investment in the Securities may be considered

to be speculative. Since the Securities are not principal protected and the Principal Amount will be at risk, you could lose substantially all of your investment. See “Risk Factors”.

Price: \$100 per Security
Minimum Subscription: \$5,000 (50 Securities)

	Price to public	Selling Commissions and Dealer’s fee⁽¹⁾	Net proceeds to the Bank
Per Security	\$100.00	\$0.00	\$100.00
Total ⁽²⁾	\$20,000,000	\$0.00	\$20,000,000

(1) No sales commission will be paid in connection with this issuance of Securities. An agency fee will be paid, from the Bank’s own funds, to Desjardins Securities Inc. in an amount up to 0.15% of the Principal Amount of the Securities issued under this offering for acting as independent agent.

(2) Reflects the maximum offering size of the Securities. **There is no minimum amount of funds that must be raised under this offering. This means that the issuer could complete this offering after raising only a small proportion of the offering amount set out above.**

The Securities are offered severally by RBC Dominion Securities Inc. (“**RBC DS**”) and Desjardins Securities Inc. (collectively, the “**Dealers**”) as agents under a dealer agreement dated March 28, 2022, as amended or supplemented from time to time. **RBC DS is our wholly owned subsidiary. Consequently, we are a related and connected issuer of RBC DS within the meaning of applicable securities legislation.** See “Dealers” in this pricing supplement and “Plan of Distribution” in the program supplement.

The Securities will not be listed on any stock exchange. Securities may be resold using the Fundserv network at a price determined at the time of sale by the Calculation Agent (defined herein), which price may be lower than the Principal Amount of such Securities. There is no assurance that a secondary market for the Securities will develop or be sustained. See “Secondary Market for Securities”, “Description of the Securities—Calculation Agent” and “Risk Factors” in the program supplement and “Secondary Market” in this pricing supplement.

Bank Trademarks

Lion & Globe symbol and RBC LiONS™ are registered trademarks of Royal Bank of Canada.

Prospectus for Securities

Securities described in this pricing supplement will be issued under our Senior Note Program and will be unsecured, unsubordinated debt obligations. The Securities are Senior Debt Securities (as defined in the base shelf prospectus referred to below) and are described in four separate documents: (1) the base shelf prospectus, (2) the program supplement, (3) the product supplement, and (4) this pricing supplement, all of which collectively constitute the “prospectus” for the Securities. See “Prospectus for Securities” in the program supplement.

Documents Incorporated by Reference

This pricing supplement is deemed to be incorporated by reference into the base shelf prospectus solely for the purpose of our Senior Note Program and the Securities issued hereunder. Other documents are also incorporated or deemed to be incorporated by reference into the base shelf prospectus and references should be made to the base shelf prospectus for full particulars.

Marketing Materials

The version of the summary for the Securities that was filed with the securities commissions or similar regulatory authorities in each of the provinces and territories of Canada as “marketing materials” (as defined in National Instrument 41-101 – *General Prospectus Requirements*) on November 15, 2022 is deemed to be incorporated by reference into the base shelf prospectus solely for the purpose of our Senior Note Program and the Securities issued hereunder. Any version of marketing materials filed with the securities commission or similar regulatory authority in each of the provinces and territories of Canada in connection with this offering after the date hereof but prior to the termination of the distribution of the Securities under this pricing supplement (including any amendments to, or an amended version of, the marketing materials) is deemed to be incorporated by reference herein and in the base shelf prospectus solely for the purpose of our Senior Note Program and the Securities issued hereunder. Any such marketing materials are not part of this pricing supplement or the base shelf prospectus to the extent that the contents of the marketing materials have been modified or superseded by a statement contained in an amendment to this pricing supplement.

Caution Regarding Forward-Looking Statements

From time to time, we make written or oral forward-looking statements within the meaning of certain securities laws, including the “safe harbour” provisions of the United States Private Securities Litigation Reform Act of 1995 and any applicable Canadian securities legislation. We may make forward-looking statements in the base shelf prospectus and in the documents incorporated by reference therein, in the program supplement, in the product supplement, in this pricing supplement, in other filings with Canadian regulators or the United States Securities and Exchange Commission, in other reports to shareholders, and in other communications. Forward-looking statements in, or incorporated by reference in, this prospectus include, but are not limited to, statements relating to our financial performance objectives, vision and strategic goals, the Economic, market and regulatory review and outlook section of our management’s discussion and analysis for the three and nine month periods ended or as at July 31, 2022 (the “**Q3 2022 Management’s Discussion and Analysis**”) and in the Economic, market and regulatory review and outlook section of our management’s discussion and analysis for the year ended October 31, 2021 (the “**2021 Management’s Discussion and Analysis**”) for Canadian, U.S., U.K., European and global economies, the regulatory environment in which we operate, the impact from rising interest rates, the expected closing of the transaction involving Brewin Dolphin Holdings PLC and the risk environment including our credit risk, market risk, liquidity and funding risk, and the potential continued impacts of the coronavirus (COVID-19) pandemic on our business operations, financial results, condition and objectives and on the global economy and financial market conditions and includes our President and Chief Executive Officer’s statements. The forward-looking information contained in, or incorporated by reference in, this prospectus is presented for the purpose of assisting the holders of our securities and financial analysts in understanding our financial position and results of operations as at and for the periods ended on the dates presented, as well as our financial performance objectives, vision and strategic goals, and may not be appropriate for other purposes. Forward-looking statements are typically identified by words such as “believe”, “expect”, “foresee”, “forecast”, “anticipate”, “intend”, “estimate”, “goal”, “commit”, “target”, “objective”, “plan” and “project” and similar expressions of future or conditional verbs such as “will”, “may”, “might”, “should”, “could” or “would”.

By their very nature, forward-looking statements require us to make assumptions and are subject to inherent risks and uncertainties, which give rise to the possibility that our predictions, forecasts, projections, expectations or conclusions will not prove to be accurate, that our assumptions may not be correct and that our financial performance objectives, vision and strategic goals will not be achieved. We caution readers not to place undue reliance on these statements as a number of risk factors could cause our actual results to differ materially from the expectations expressed in such forward-looking statements. These factors

– many of which are beyond our control and the effects of which can be difficult to predict – include: credit, market, liquidity and funding, insurance, operational, regulatory compliance (which could lead to us being subject to various legal and regulatory proceedings, the potential outcome of which could include regulatory restrictions, penalties and fines), strategic, reputation, competitive, legal and regulatory environment, and systemic risks and other risks discussed in the risk sections and Impact of COVID-19 pandemic section of the 2021 Management’s Discussion and Analysis and the Risk management section of the Q3 2022 Management’s Discussion and Analysis incorporated by reference herein; including business and economic conditions in the geographic regions in which we operate, information technology and cyber risks, environmental and social risk (including climate change), digital disruption and innovation, Canadian housing and household indebtedness, geopolitical uncertainty, privacy, data and third-party related risks, regulatory changes, culture and conduct, the effects of changes in government fiscal, monetary and other policies, tax risk and transparency, and the emergence of widespread health emergencies or public health crises such as pandemics and epidemics, including the COVID-19 pandemic and its impact on the global economy, financial market conditions and our business operations, and financial results, condition and objectives. In addition, as we work to advance our climate goals, external factors outside of the Bank’s reasonable control may act as constraints on their achievement, including varying decarbonization efforts across economies, the need for thoughtful climate policies around the world, more and better data, reasonably supported methodologies, technological advancements, the evolution of consumer behaviour, the challenges of balancing interim emissions goals with an orderly and just transition, and other significant considerations such as legal and regulatory obligations.

We caution that the foregoing list of risk factors is not exhaustive and other factors could also adversely affect our results. When relying on our forward-looking statements to make decisions with respect to us or the Securities, investors and others should carefully consider the foregoing factors and other uncertainties and potential events. Material economic assumptions underlying the forward-looking statements contained in this prospectus are set out in the Economic, market and regulatory review and outlook section and for each business segment under the Strategic priorities and Outlook sections in our 2021 Management’s Discussion and Analysis, as updated by the Economic, market and regulatory review and outlook section of the Q3 2022 Management’s Discussion and Analysis. Except as required by law, we do not undertake to update any forward-looking statement, whether written or oral, that may be made from time to time by us or on our behalf.

Additional information about these and other factors can be found in the risk sections and Impact of COVID-19 pandemic section of the 2021 Management’s Discussion and Analysis and in the Risk management section of the Q3 2022 Management’s Discussion and Analysis incorporated by reference in this prospectus.

**Royal Bank of Canada
Senior Note Program
Index Linked Securities
Maximum \$20,000,000 (200,000 Securities)
RBC LiONS™ Solactive Canada Bank 40 AR Index Linked Fixed 8.15% Securities (CAD), Series 21, F-
Class
Due December 16, 2027
Non-Principal Protected Securities**

Issuer:	Royal Bank of Canada (the “ Bank ”)
Dealers:	RBC Dominion Securities Inc. (“ RBC DS ”) and Desjardins Securities Inc. Desjardins Securities Inc., a dealer to which we are neither related nor connected, participated in the due diligence activities performed by the Dealers in respect of the offering, but did not participate in the structuring and pricing of the offering or the calculation of the initial estimated value of the Securities. See “Plan of Distribution” in the program supplement.
Issue:	RBC LiONS™ Solactive Canada Bank 40 AR Index Linked Fixed 8.15% Securities (CAD), Series 21, F-Class due December 16, 2027.
Fundserv Code:	RBC7231
Objective of the Securities:	The Securities have been designed to provide investors with monthly Interest Payments (defined below) where the investors are willing and can afford to risk substantially all of the Principal Amount (defined below) of their investment because they believe that the Final Index Level (defined below) will be greater than or equal to the Protection Barrier Level (defined below).
Issue Price:	The Securities will be issued at a price equal to their Principal Amount.
Minimum Investment:	50 Securities or \$5,000.
Denomination:	Securities are issuable in denominations of \$100 (the “ Principal Amount ”) and in minimum increments of \$100.
Issue Date:	December 16, 2022 or such other date as may be agreed to by the Bank and the Dealers.
Issue Size:	The maximum issue size will be an aggregate amount of \$20,000,000.
Maturity Date:	December 16, 2027 (approximately a five-year term). See “Description of the Index Linked Securities – Maturity Date and Amount Payable” in the product supplement.
Principal at Risk Securities:	All but 1% of the Principal Amount of the Securities is fully exposed. You could lose substantially all of your investment. See “Description of the Index Linked Securities — Principal at Risk Securities” and “Risk Factors” in the product supplement. The monthly Interest Payments will accrue and be paid on the Principal Amount of the Securities and will not be contingent on or related to the performance of the Underlying Index (defined below).
Underlying Index:	<p>The payment at maturity on the Securities is linked to the adjusted returns of the Solactive Canada Bank 40 AR Index (the “Underlying Index”). The Underlying Index is an adjusted return index that aims to track the gross total return performance of the Solactive Canada Bank TR Index (the “Target Index”), subject to a reduction of a synthetic dividend of 40 index points per annum calculated daily in arrears (the “Adjusted Return Factor”). For the avoidance of doubt, the payment at maturity on the Securities is linked to the Underlying Index and is not linked to the Target Index. The Closing Level (defined below) on November 10, 2022 was 805.29. The Adjusted Return Factor divided by the Closing Level was therefore equal to 4.9672% on November 10, 2022. Over the term of the Securities, the sum of the Adjusted Return Factor will be approximately 200 index points, representing 24.8358% of the Closing Level on November 10, 2022.</p> <p>The Target Index is a gross total return index that reflects the price changes of its constituent securities and the reinvestment in the index of any dividends and distributions paid in respect of such securities. For the calculation of the level of the Target Index, any dividends or other</p>

distributions paid on the constituent securities of the Target Index are assumed to be reinvested across all of the constituent securities of the Target Index. There is no assurance of the ability of issuers of the securities comprising the Target Index to declare and pay dividends or make distributions in respect of the constituents of the Target Index or to sustain or increase such dividends and distributions at or above historical levels. As of November 10, 2022, the annual dividend yield on the Target Index was 4.2995%, representing an aggregate dividend yield of approximately 23.427% compounded annually over the term of the Securities, on the assumption that the dividend yield remains constant. The performance of the Underlying Index will vary higher or lower from the performance of a price return index (being an index which tracks the price performance of its constituent securities without taking into account the effects of dividends and distributions) with the same constituents and weights as the Target Index over the term of the Securities depending on whether the impact of the dividends and other distributions reinvested in the Target Index is greater or less than the impact the Adjusted Return Factor has on the Closing Level over the term of the Securities. The Target Index is adjusted quarterly, ordinarily in March, June, September and December, and is also subject to extraordinary adjustments in compliance with the rules of the Index Sponsor (defined below). For further details regarding these adjustments and the methodology for the Target Index, refer to the Index Sponsor's website at www.solactive.com.

See "Description of the Index Linked Securities — Indices" in the product supplement. See Appendix A to this pricing supplement for summary information regarding the Underlying Index.

Securities do not represent an interest in the Underlying Index, the Target Index or in the securities of the entities that comprise the Target Index, and holders will have no right or entitlement to such securities including, without limitation, redemption rights (if any), voting rights or rights to receive dividends or other distributions paid on such securities. The return on the Securities will not reflect the total return that an investor would receive if such investor owned the securities that comprise the Target Index. There is no requirement for the Bank to hold any interest in the Underlying Index, the Target Index or in the securities of the entities that comprise the Target Index.

This pricing supplement has been prepared for the sole purpose of assisting prospective investors in making an investment decision with respect to the Securities. This pricing supplement relates only to the Securities offered hereby and does not relate to the Underlying Index, the Target Index and/or the Index Sponsor. The Bank and the Dealers have not verified the accuracy or completeness of any information pertaining to the Underlying Index or determined whether there has been any omission by the Index Sponsor to disclose any facts, information or events which may have occurred prior to or subsequent to the date as of which any information has been furnished by the Index Sponsor which may affect the significance or accuracy of such information. Neither the Bank nor any Dealer makes any representation that such publicly available documents or any other publicly available information regarding the Underlying Index or Index Sponsor is accurate or complete. Prospective investors should independently investigate the Underlying Index and the Index Sponsor and decide whether an investment in the Securities is appropriate. The Index Sponsor has not participated in the preparation of this pricing supplement and the Securities are not in any way sponsored, endorsed, sold or promoted by the Index Sponsor. See "Description of the Index Linked Securities – Indices" in the product supplement.

Index Sponsor:	"Index Sponsor" means Solactive AG.
Initial Index Level:	The "Initial Index Level" is the Closing Level, as published by the Index Sponsor, on December 12, 2022.
Protection Barrier Level	The "Protection Barrier Level" for the Underlying Index is 75.00% of the Initial Index Level.
Final Index Level:	The "Final Index Level" is the Closing Level, as published by the Index Sponsor, on December 13, 2027 (the "Final Valuation Date").
Closing Level:	The "Closing Level" on any date is the official closing level of the Underlying Index quoted on www.solactive.com for such date, as determined by the Calculation Agent (defined

below). The official closing level of the Underlying Index is available from other sources, such as Bloomberg L.P.; however, neither the Bank nor the Dealers make any representation as to the accuracy of such information and all calculations regarding the Closing Level will be made by the Calculation Agent.

Interest Payments:	Holders will receive interest payments (the “ Interest Payments ” and each an “ Interest Payment ”) at a fixed interest rate of 0.6792% per Interest Period (defined below), payable monthly on each Interest Payment Date (defined below). On the basis of the foregoing, the interest on each \$100 Principal Amount of Securities for an Interest Period would equal $\$100 \times 0.6792\%$, or \$0.6792. The Interest Payments will not be contingent on or related to the performance of the Underlying Index.
Interest Periods:	The “ Interest Period ” for an Interest Payment is the period from and including the most recent Interest Payment Date to but excluding the subsequent Interest Payment Date, provided that the first Interest Period will commence on, and include, the Issue Date and the final Interest Period will end on, but exclude, the Maturity Date.
Interest Payment Dates:	The “ Interest Payment Date ” for the payment of interest will occur on January 16, 2023 and on the 16 th day of each month thereafter to and including the Maturity Date. If any such Interest Payment Date is not a Business Day (defined in the program supplement), the payment will be made on the first following day that is a Business Day.
Payment at Maturity:	<p>On the Maturity Date, the amount payable (the “Redemption Amount”) for each \$100 Principal Amount per Security will be equal to:</p> <p>(a) if the Final Index Level is greater than or equal to the Protection Barrier Level, \$100; or</p> <p>(b) if the Final Index Level is less than the Protection Barrier Level, an amount equal to $\\$100 \times (X_f / X_i)$, but in any event not less than \$1.00,</p> <p>where:</p> <p>“X_f” means the Final Index Level, and</p> <p>“X_i” means the Initial Index Level.</p> <p>As a result, the Redemption Amount will not be determinable before the Final Valuation Date. See “Risk Factors” below.</p> <p>The Redemption Amount will be paid in addition to the Interest Payment that is due on the Maturity Date.</p>
Sample Calculations:	See Appendix B to this pricing supplement for sample calculations of the Redemption Amount and the Interest Payments payable on the Securities.
Issuer Credit Rating:	<p>Moody’s: Aa1</p> <p>Standard & Poor’s: AA-</p> <p>DBRS: AA</p> <p>The Securities themselves have not been and will not be rated. See “Description of the Securities — Ratings” in the program supplement.</p>
Extraordinary Events:	Determination of the Closing Level, including the Initial Index Level and/or the Final Index Level, and the Redemption Amount may be postponed, or the Bank can accelerate determination of the Final Index Level and the Redemption Amount and repay the Securities in full prior to their maturity, in certain circumstances. If an Extraordinary Event occurs then the Calculation Agent may, but is not required to, make such adjustments to any payment or other term of the Securities as it determines to be appropriate, acting in good faith, to account for the economic effect of such event on the Securities and determine the effective date of any such adjustment. See “Description of the Securities — Special Circumstances” in the program supplement and “Description of the Index Linked Securities — Extraordinary Events” in the product supplement.
Summary of Fees and Expenses:	No sales commission will be payable in connection with this issuance of Securities. The Bank will pay, from the Bank’s own funds, an agency fee to Desjardins Securities Inc. in an amount up to 0.15% of the Principal Amount of the Securities issued under this offering for acting as independent agent. The agency fee is indirectly borne by holders of the Securities. There are

no fees directly payable by a holder of Securities. See “Description of the Securities — Summary of Fees and Expenses” in the program supplement.

Eligibility for Investment: Eligible for RRSPs, RRIAs, RESPs, RDSPs, DPSPs and TFSAs. See “Eligibility for Investment” in Appendix C, including the summary of the “prohibited investment” rule.

Risk Factors: You should carefully consider all the information set out in this prospectus for any Securities in which you are considering investing. **In particular, you should evaluate the risks described under “Risk Factors” in each of the base shelf prospectus and the product supplement, as well as the risks described below.** The Redemption Amount payable on the Securities at maturity is unknown and subject to many variables, including interest rate fluctuations and changes in the Underlying Index levels. You should independently determine, with your own advisors, whether an investment in the Securities is suitable for you having regard to your own investment objectives and expectations.

No Upside Participation by the Securities

The return on the Securities is limited; even if the Final Index Level is greater than or equal to the Protection Barrier Level, the maximum return on the Securities, over the term of the Securities, would be equal to \$40.75 per Security. The Securities will not participate in any upside performance of the Underlying Index, and in the event of any increase in the level of the Underlying Index, holders will only receive their principal at maturity in addition to the Interest Payments.

Concentration of the Constituent Securities in the Target Index

The constituent securities in the Target Index are all Canadian chartered bank stocks and are therefore all concentrated in one industry sector. This means that the performance of the Securities will be tied entirely to the success of this one industry sector. Canadian chartered banks are subject to risks that are specific to that industry sector and which may therefore result in the performance of the Securities being substantially different, and potentially worse, than other industry sectors or the securities/equity markets generally.

The Target Index Includes the Common Shares of the Bank

The common shares of the Bank are included in the Target Index and the decisions and actions of the board of directors and management of the Bank will not take into account the effect, if any, of such decisions and actions on the Underlying Index, the Target Index or investors of the Securities interests generally.

Uncertain Redemption Amount until Final Valuation Date

There can be no assurance that the objectives of the Securities will be achieved. Other than the regular Interest Payments payable during the term of the Securities (which are not contingent on or related to the performance of the Underlying Index), depending on the performance of the Underlying Index, holders of the Securities may not be repaid the amount they invested in the Securities (other than \$1.00 per Security). Historical levels of the Underlying Index should not be considered as an indication of the future performance of the Underlying Index. Investors should understand that the risk involved in this type of investment is greater than that normally associated with other types of investments.

Volatility May Affect the Redemption Amount or Trading Value of the Securities

Volatility is the term used to describe the size and frequency of price and/or market fluctuations. If the volatility, or anticipated volatility, of the Underlying Index changes over the term of the Securities, the trading value of the Securities may be adversely affected. In periods of high volatility, the likelihood of an investor not receiving a return of the full Principal Amount of the Securities increases.

The Underlying Index and Target Index Have Limited Performance Histories

The Underlying Index and Target Index have limited performance histories. The Underlying Index and Target Index were first launched and published on January 27, 2022 and July 28, 2017, respectively. Accordingly, there is limited trading history for the Underlying Index and Target Index and as such, the Securities may perform in unexpected ways and may involve

greater risk than securities linked to one or more indices with a more established record of performance. This may make it more difficult for an investor to make an informed decision with respect to the Securities.

Changes Affecting the Underlying Index or the Target Index Could Impact the Securities

The policies of the Index Sponsor in respect of the Underlying Index, the Target Index and their calculations, additions, deletions or substitutions of the constituent securities of the Target Index and the manner in which changes affecting the constituent securities of the Target Index, such as stock dividends, reorganizations or mergers, are reflected, could affect the Closing Level and, therefore, could affect the amounts payable on the Securities, and the price of the Securities prior to maturity.

Redemption Amount Calculated With Reference to Performance of the Underlying Index

The Redemption Amount is calculated with reference to the performance of the Underlying Index, which is not a price return index and instead aims to track the gross total return performance of the Target Index less the Adjusted Return Factor. Although the Target Index is a gross total return index that reflects the applicable performance of the constituent securities of the Target Index and any dividends and distributions paid in respect of such securities, without deduction of any withholding tax or other amounts to which an investor holding the constituent securities of the Target Index would typically be exposed, an investment in the Securities is not the same as making a direct investment in the constituent securities of the Target Index, including the fact that an investor will not have the right to receive any dividends, distributions or other income or amounts accruing or paid on such securities, nor will an investor have the right to exercise any voting rights on such securities. In addition, the Adjusted Return Factor is not representative of an estimate or a forecast of any dividends that may be paid or payable, or of any distributions that may be made, now or in the future on the constituent securities of the Target Index.

Returns on the Underlying Index Are Reduced by the Adjusted Return Factor and will be Lower than Returns on the Target Index

Since the Closing Level is based on the application of the Adjusted Return Factor to daily changes in the closing level of the Target Index, the performance of the Underlying Index will be less than that of the Target Index or a direct investment in the constituent securities of the Target Index. Furthermore, the difference between the Underlying Index and the Target Index over a longer period is subject to the effects of compounding returns and, as a result, may be greater or less than the Adjusted Return Factor pro-rated over the same period.

The Adjusted Return Factor is a Fixed Point Deduction

The Adjusted Return Factor is a fixed point deduction which means that the Underlying Index is based on the daily gross total return performance of the Target Index less a fixed number of points. The Adjusted Return Factor does not vary with the level of the Target Index and, as a result, the Adjusted Return Factor will result in the subtraction of a greater percentage of the level of the Target Index in circumstances where the level of the Target Index decreases over time.

Dividends and Distributions of the Constituent Securities of the Target Index May Vary When Compared to Historical Levels

The Underlying Index is not a price return index and instead aims to track the gross total return performance of the Target Index less the Adjusted Return Factor, which represents a reduction for a synthetic dividend of 40 index points per annum calculated daily in arrears. The level of the Target Index and, in turn, the Closing Level, may be affected by the ability of issuers comprising the Target Index to declare and pay dividends or make distributions in respect of the equity securities of the issuers comprising the Target Index. Historical levels of dividends and distributions paid in respect of the constituent securities comprising the Target Index are not indicative of future payments, which payments are uncertain and depend upon various factors, including, without limitation, the financial position, earnings ratio and cash requirements of the applicable issuer and the state of financial markets in general. It is not possible to predict if dividends or distributions paid in respect of the constituent securities

comprising the Target Index will increase, decrease or remain the same over the term of the Securities. If the dividends paid out by the constituent securities comprising the Target Index over a period of time decrease below the synthetic dividends represented by the Adjusted Return Factor (taking into account the reinvestment and compounding impacts), the Closing Level at the end of such period will be lower than the closing level of a price return index comprised of the same constituent securities at the end of such period.

The Initial Estimated Value of the Securities Is Less than the Price to the Public and May not Reflect the Secondary Market Price, if any, of the Securities

The initial estimated value set forth on the cover page of this pricing supplement does not represent a minimum price at which the Bank, RBC DS or any of our affiliates would be willing to purchase the Securities in any secondary market (if any exists) at any time. If you attempt to sell the Securities prior to maturity, their market value may be lower than the initial estimated value and the price you paid for them. This is due to, among other things, changes in the level of the Underlying Index and the inclusion in the price to the public of the agency fee, as well as an amount retained by the Bank to compensate it for the creation, issuance and maintenance of the Securities (which may or may not also include any costs of its hedging obligations thereunder). These factors, together with various market and economic factors over the term of the Securities, could reduce the price at which you may be able to sell the Securities in any secondary market and will affect the value of the Securities in complex and unpredictable ways. Even if there is no change in market conditions or any other relevant factors, the price, if any, at which you may be able to sell your Securities prior to maturity may be less than your original purchase price. The Securities are not designed to be short-term trading instruments. Accordingly, you should be able and willing to hold your Securities to maturity.

The Initial Estimated Value of the Securities Is an Estimate Only, Calculated as of the Time the Terms of the Securities Were Set

The initial estimated value of the Securities is based on the value of the Bank's obligation to make the payments on the Securities. The return on the Securities can be replicated by purchasing and selling a combination of financial instruments, such as call options and put options. The fair value of the financial instrument components that would replicate the return on the Securities is equal to the fair value of the Securities. The Bank's estimate is based on a variety of assumptions, which may include expectations as to dividends, interest rates, the Bank's internal funding rates and volatility, and the term to maturity of the Securities. The Bank's internal funding rates may differ from the market rates for the Bank's conventional debt securities. These assumptions are based on certain forecasts about future events, which may prove to be incorrect. Other entities may value the Securities or similar securities at a price that is significantly different than the Bank does. The value of the Securities at any time after the date of this pricing supplement will vary based on many factors, including changes in market conditions, and cannot be predicted with accuracy. As a result, the actual value you would receive if you sold the Securities in the secondary market, if any, should be expected to differ materially from the initial estimated value of the Securities.

**Preparation of Initial
Estimated Value:**

The Securities are debt securities of the Bank, the return on which is linked to the performance of the Underlying Index. In order to satisfy the Bank's payment obligations under the Securities, the Bank may choose to enter into certain hedging arrangements (which may include call options, put options or other derivatives) on the Issue Date which may or may not be with RBC DS or one of our other subsidiaries. The terms of these hedging arrangements, if any, take into account a number of factors, including the Bank's creditworthiness, interest rate movements, the volatility of the Underlying Index, and the term to maturity of the Securities.

The price of the Securities to the public also reflects the agency fee, as well as an amount retained by the Bank to compensate it for the creation, issuance and maintenance of the Securities (which may or may not also include any costs of its hedging obligations thereunder). The initial estimated value for the Securities shown on the cover page will therefore be less than their public offering price. See "Risk Factors – The Initial Estimated

Value of the Securities Is Less than the Price to the Public and May not Reflect the Secondary Market Price, if any, of the Securities” above.

The Bank has adopted written policies and procedures for determining the fair value of Securities issued by it pursuant to the Senior Note Program. These policies and procedures include: (a) methodologies used for valuing each type of financial instrument component that can be used in combination to replicate the return of the Securities; (b) the methods by which the Bank will review and test valuations to assess the quality of the prices obtained as well as the general functioning of the valuation process; and (c) how to deal with conflicts of interest.

Suitability for Investment:

You should consult with your advisors regarding the suitability of an investment in the Securities. The Securities may be suitable for:

- investors who believe that the Final Index Level will be above the Protection Barrier Level
- investors who are willing and can afford to risk substantially all of the principal amount of their investment
- investors seeking an investment product with exposure to the common shares of the Canadian banks comprising the Target Index
- investors looking to earn a fixed-rate return and who are prepared to assume the risks associated with an investment linked to the performance of the Underlying Index, which is not a price return index and instead aims to track the gross total return performance of the Target Index less the Adjusted Return Factor
- investors with an investment horizon equal to the term to maturity of the Securities who are prepared to hold the Securities until maturity
- investors who understand that the potential return on the Securities is limited; the maximum return on the Securities is equal to \$40.75 per Security

Book-entry Only Securities

The Securities will be Fundserv Securities (defined in the program supplement) and will be issued through the “book-entry-only system”. See “Description of the Securities – Global Securities” and “– Legal Ownership” in the program supplement.

If the Securities are issued in fully registered and certificated form in the circumstances described in the program supplement under “Description of the Securities – Legal Ownership – Book-Entry-Only Fundserv Securities”, the Interest Payments will be paid by the Bank to the registered holder.

Listing:

The Securities will not be listed on any stock exchange. See “Risk Factors” in the product supplement.

Secondary Market:

Securities may be purchased through dealers and other firms that facilitate purchase and related settlement using the Fundserv network. Securities may be resold using the Fundserv network at a sale price equal to the price posted on Fundserv as of the close of business on the Exchange Day (defined in the product supplement) on which the order is placed, as determined by and posted to Fundserv by the Calculation Agent, which sale price may be lower than the Principal Amount of such Securities. Generally, to be effective on a Business Day (defined in the program supplement), a redemption request will need to be initiated by 2:00 p.m. (Toronto time) on that Business Day (or such other time as may be established by Fundserv). Any request received after such time will be deemed to be a request sent and received on the next following Business Day. See “Risk Factors – The Initial Estimated Value of the Securities Is Less than the Price to the Public and May not Reflect the Secondary Market Price, if any, of the Securities” above and “Secondary Market for Securities – Fundserv” in the program supplement.

Information regarding the Closing Level, the Protection Barrier Level and the daily closing price for the Securities may be accessed at www.rbcnotes.com. There is no assurance that a secondary market for the Securities will develop or be sustained. See “Secondary Market for Securities” in the program supplement.

Fiscal Agent:

RBC DS. See “Description of the Securities – Fiscal Agency, Calculation Agency and Fundserv Depository Agreement” in the program supplement.

Calculation Agent:	RBC DS. See “Description of the Securities – Calculation Agent” in the program supplement and “Risk Factors” in the product supplement.
Tax:	An initial purchaser of Securities who acquires Securities from the Bank on the Issue Date and who, at all relevant times, for purposes of the <i>Income Tax Act</i> (Canada), is an individual (other than a trust), is a resident of Canada, deals at arm’s length with and is not affiliated with the Bank, and acquires and holds the Securities as capital property will be required to include in computing income all interest received or receivable on the Securities, as well as certain accrued interest thereon on a disposition thereof. If, on maturity or other disposition (including on early repayment in full by the Bank), such a holder receives an amount that is less than the adjusted cost base of the Securities, such holder will realize a capital loss equal to the shortfall. See “Certain Canadian Tax Considerations” in Appendix C. Potential purchasers of Securities should consult with their own tax advisors having regard to their particular circumstances.

APPENDIX A

Summary Information Regarding the Underlying Index

The Solactive Canada Bank 40 AR Index

The following is a summary description of the Solactive Canada Bank 40 AR Index based on information obtained from the Index Sponsor's website at www.solactive.com. The Solactive Canada Bank 40 AR Index is owned, calculated, administered and published by the Index Sponsor, Solactive AG, assuming the role as administrator under the Regulation (EU) 2016/1011.

Underlying Index	Solactive Canada Bank 40 AR Index
Target Index	Solactive Canada Bank TR Index
Adjusted Return Factor	40 index points per annum (see below)
Number of Constituents comprising Target Index	6
Country	Canada
Index Sponsor	Solactive AG
Closing Level (November 10, 2022)	805.29

Public Information

Information contained in this pricing supplement with respect to the Underlying Index, the Target Index and the constituent securities in the Target Index was obtained from a number of public sources that the Bank believes to be reliable. Information relating to the Underlying Index and the Target Index can be obtained from the website maintained by the Index Sponsor, www.solactive.com, as well as other publicly available sources. The Bank and the Dealers, as well as their respective affiliates and associates, have not independently verified the accuracy or completeness of any such information, including the calculation, maintenance or publication of the Underlying Index or the Target Index.

The Solactive Canada Bank 40 AR Index was first launched and published on January 27, 2022. The Solactive Canada Bank TR Index was first launched on July 28, 2017. Additional information with respect to the Underlying Index and the Target Index can be found at www.solactive.com/indices.

The Underlying Index

The Solactive Canada Bank 40 AR Index is an adjusted return index that aims to track the gross total return performance of the Target Index, subject to a reduction of a synthetic dividend of 40 index points per annum calculated daily in arrears. **For the avoidance of doubt, the payment at maturity on the Securities is linked to the Underlying Index and is not linked to the Target Index.** The Closing Level on November 10, 2022 was 805.29. The Adjusted Return Factor divided by the Closing Level was therefore equal to 4.9672% on November 10, 2022. Over the term of the Securities, the sum of the Adjusted Return Factor will be approximately 200 index points, representing 24.8358% of the Closing Level on November 10, 2022.

The performance of the Underlying Index will vary higher or lower from the performance of a price return index with the same constituents and weights as the Target Index over the term of the Securities depending on whether the impact of the dividends and other distributions reinvested in the Target Index is greater or less than the impact the Adjusted Return Factor has on the Closing Level over the term of the Securities. An investment in the Securities does not represent a direct or indirect investment in any of the constituent securities that comprise the Target Index. Holders of the Securities have no right or entitlement to the dividends or distributions paid on such constituent securities.

The Target Index

The Solactive Canada Bank TR Index is a gross total return index that reflects the price changes of its constituent securities and the reinvestment in the index of any dividends and distributions paid in respect of such securities. For the calculation of the level of the Target Index, any dividends or other distributions paid on the constituent securities of the Target Index are assumed to be reinvested across all of the constituent securities of the Target Index. As of November 10, 2022, the annual dividend yield on the Target Index was 4.2995%, representing an aggregate dividend yield of approximately 23.427% compounded annually over the term of the Securities, on the assumption that the dividend yield remains constant. The Target Index is adjusted quarterly, ordinarily in March, June, September and December, and is also subject to extraordinary

adjustments in compliance with the rules of the Index Sponsor. For further details regarding these adjustments and the methodology for the Target Index, refer to the Index Sponsor’s website at www.solactive.com.

The Target Index is an equally-weighted free-float market capitalization index. The methodology for the Target Index provides that the constituent securities fulfill all of the following criteria: (i) listed on the Toronto Stock Exchange and have their primary listing in Canada; (ii) classified by the Index Sponsor as “Major Banks” or “Regional Banks”; (iii) security market capitalization of at least \$4 billion; and (iv) a minimum average daily trading value of \$10 million across all Canadian exchanges, as calculated by the Index Sponsor.

Constituents of the Target Index

The following table shows, as of November 10, 2022, the constituent securities included in the Target Index and their respective weightings:

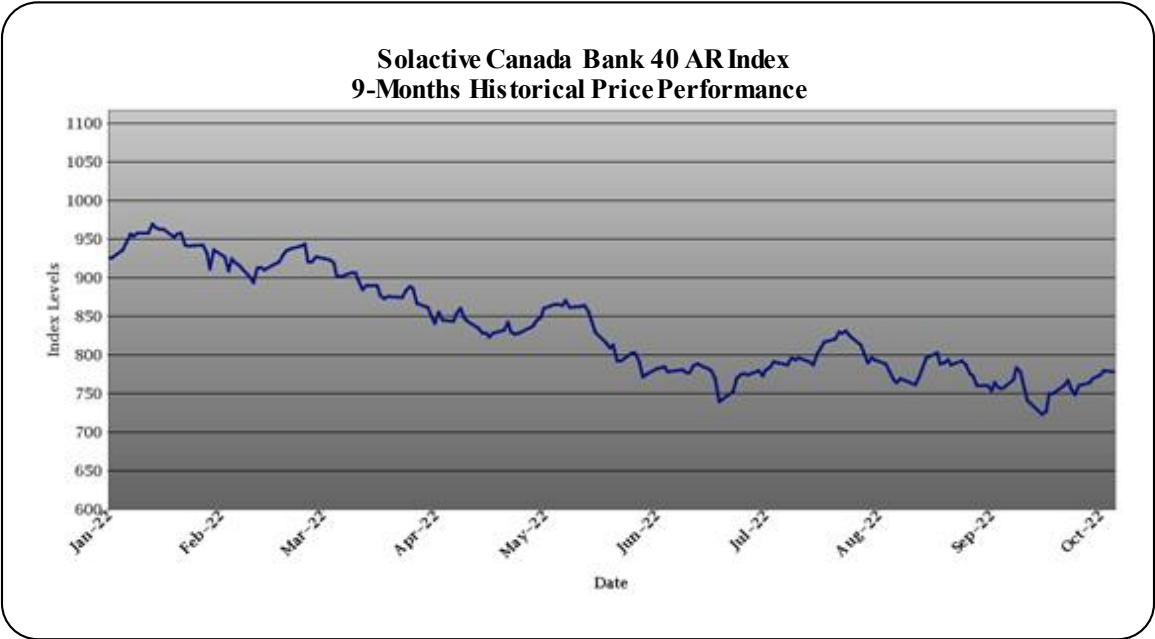
Constituent	Weighting*
Royal Bank of Canada	30.44%
The Toronto-Dominion Bank	26.61%
Bank of Montreal	14.54%
The Bank of Nova Scotia	13.64%
Canadian Imperial Bank of Commerce	9.47%
National Bank of Canada	5.31%

Source: Solactive AG, www.solactive.com
*Percentages may not add up to 100% due to rounding.

There can be no guarantee that the constituents of the Target Index or any component thereof will maintain their current level of capitalization or continue to operate their business with emphasis on the areas indicated. Historical performance is representative of historical performance only and is not indicative of, or a representation of, future performance.

Historical Performance

The following chart sets forth the historical level of the Solactive Canada Bank 40 AR Index for the period from January 27, 2022 to October 31, 2022. The historical performance of the Solactive Canada Bank 40 AR Index tracks the gross total return performance of the Target Index, subject to a reduction of a synthetic dividend of 40 index points per annum calculated daily in arrears.



Historical performance of the Solactive Canada Bank 40 AR Index will not necessarily predict future performance of the Solactive Canada Bank 40 AR Index or the Securities. The source of the data displayed in this chart is Bloomberg L.P. and its accuracy cannot be guaranteed.

Historical monthly percentage change of the Solactive Canada Bank 40 AR Index									
Month	February 2022	March 2022	April 2022	May 2022	June 2022	July 2022	August 2022	September 2022	October 2022
Percentage change (%)	-0.98	-2.57	-6.40	2.39	-10.05	1.69	-3.08	-1.36	2.85

Source: Bloomberg L.P.: Measures monthly period as of the last trading day of the previous month.

License Agreement and Disclaimer

All information contained in this pricing supplement regarding the Underlying Index and the Target Index, including, without limitation, the make-up, performance, method of calculation and changes in their constituents, has been derived from publicly available sources without independent verification. Such information reflects the policies of and is subject to change by the Index Sponsor. The Bank makes no representation or warranty as to the accuracy or completeness of such information. The Index Sponsor independently calculates, maintains and publishes the Underlying Index and Target Index. The Index Sponsor has no obligation to continue to publish, and may discontinue publication of, the Underlying Index or the Target Index. The Index Sponsor has no obligation relating to the Securities or amounts to be paid to an investor, including any obligation to take the needs of the Bank, the Dealers or the beneficial owners of the Securities into consideration for any reason. The Index Sponsor will not receive any of the proceeds of the offering of the Securities, is not responsible for and has not participated in, the offering of the Securities nor is it responsible for, nor will it participate in, the determination or calculation of the amount receivable by beneficial owners of the Securities. The Index Sponsor makes no representation or warranty, express or implied, regarding the advisability of investing in securities generally or the Securities in particular. Neither the Index Sponsor nor any of its affiliates are involved in the operation or distribution of the Securities and neither the Index Sponsor nor its affiliates shall have any liability for operation or distribution of the Securities or the failure of the Securities to achieve their investment objective.

The Index Sponsor is not related to the Bank or the Dealers. The Index Sponsor and the Bank have entered into a license agreement providing the Bank, in exchange for a fee, with the right to use the Underlying Index in connection with the Securities. The Index Sponsor does not guarantee the accuracy or completeness of the Underlying Index or the Target Index, any data included therein, or any data from which it is derived, and the Index Sponsor has no liability for any errors, omissions, or interruptions therein. The Index Sponsor does not make any warranty, express or implied, as to results to be obtained from use of information provided by the Index Sponsor in respect of the Underlying Index or the Target Index and the Index Sponsor expressly disclaims all warranties of suitability with respect thereto.

The Underlying Index and the Target Index are calculated by the Index Sponsor. The Securities are not sponsored, promoted, sold or supported in any other manner by the Index Sponsor nor does the Index Sponsor offer any express or implicit guarantee or assurance either with regard to the results of using the Underlying Index and/or Underlying Index trade mark or the Closing Level at any time or in any other respect. The Underlying Index and the Target Index are calculated and published by the Index Sponsor. The Index Sponsor uses its best efforts to ensure that the Underlying Index and the Target Index are calculated correctly. Irrespective of its obligations towards the Bank, the Index Sponsor has no obligation to point out errors in the Underlying Index or the Target Index to third parties including but not limited to investors and/or financial intermediaries of the Securities. Neither publication of the Underlying Index or the Target Index by the Index Sponsor nor the use of the Underlying Index or the Underlying Index trade marks for the purpose of use in connection with the Securities constitutes a recommendation by the Index Sponsor to invest capital in the Securities nor does it in any way represent an assurance or opinion of the Index Sponsor with regard to any investment in the Securities.

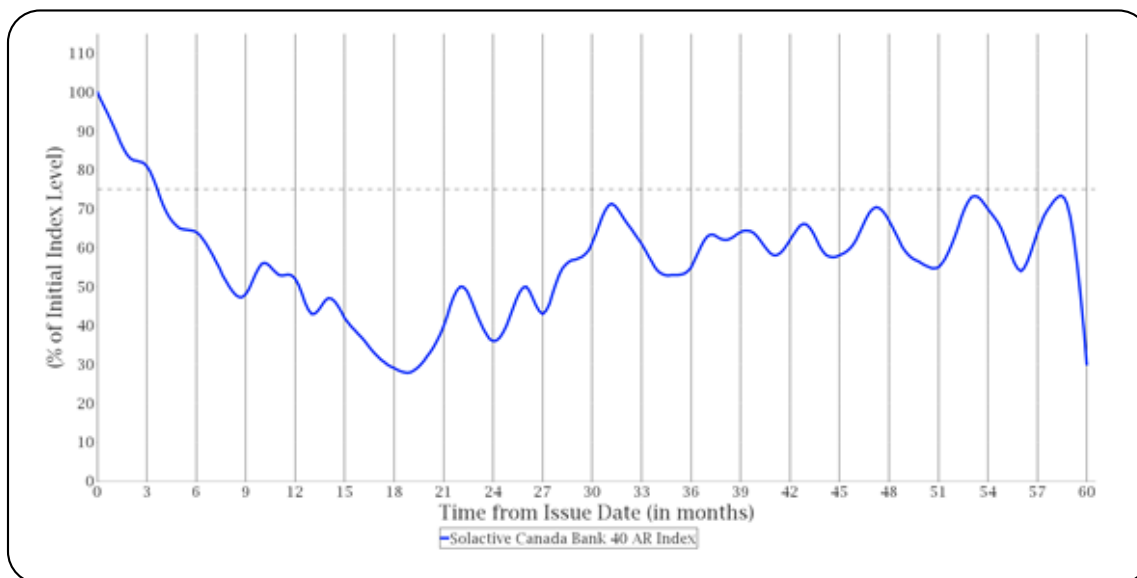
The name "Solactive" is a registered trademark of the Index Sponsor. The Index Sponsor is registered with and regulated by the German Federal Financial Supervisory Authority.

APPENDIX B

Sample Calculations of Redemption Amount and Interest Payments

The examples set out below are included for illustration purposes only. The levels of the Underlying Index used to illustrate the calculation of the Redemption Amount are not estimates or forecasts of the Initial Index Level and Final Index Level, on which the calculation of the Redemption Amount will depend. All examples below assume that a holder of the Securities has purchased Securities with an aggregate principal amount of \$100.00, that no Extraordinary Event has occurred and a Protection Barrier Level of 75.00% of the Initial Index Level. For convenience, each vertical line in the charts below represents the next succeeding Interest Payment Date. Certain dollar amounts are rounded to the nearest whole cent.

Example #1 — Underlying Index Significantly Decreases With Payment on the Maturity Date Less Than the Principal Amount



In this scenario, on the Final Valuation Date, the Final Index Level is below the Protection Barrier Level. The Underlying Index has an Initial Index Level (X_i) of 805.29 and a Final Index Level (X_f) of 265.75. Therefore, the Redemption Amount would be calculated as follows:

$$\begin{aligned} & \text{Principal Amount of Securities} \times (X_f / X_i) \\ & \$100 \times (265.75 / 805.29) = \$33.00 \end{aligned}$$

Since the monthly coupon of \$0.6792 per Security is not contingent on or related to the performance of the Underlying Index, the total Interest Payments during the term of the Securities are as follows:

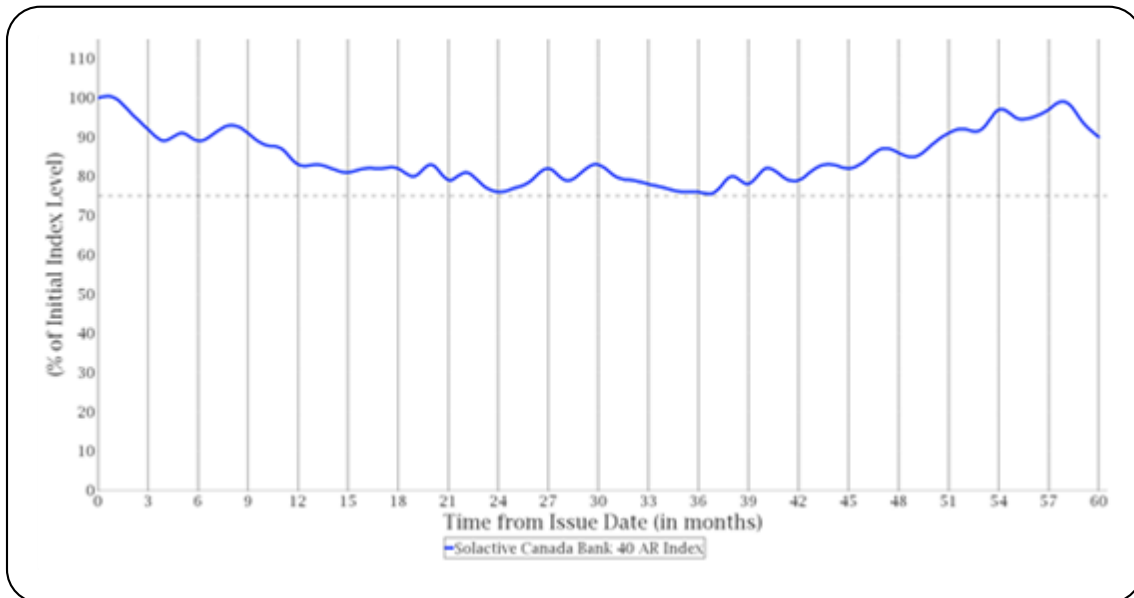
$$\begin{aligned} & \text{Principal Amount of Securities} \times 0.6792\% \text{ per Interest Period} \times 60 \text{ Interest Periods} \\ & \$100 \times 0.6792\% \times 60 = \$40.75 \end{aligned}$$

Therefore, the total amounts payable to the holder of a Security during the 60-month period from the Issue Date to the Maturity Date are:

- (a) Redemption Amount: \$33.00
- (b) Total Interest Payments made: \$40.75
- (c) Total amount paid over the term of the Securities: \$73.75

The equivalent annually compounded rate of return in this example is -5.91%.

Example #2 — Underlying Index Slightly Decreases With Payment on the Maturity Date Equal to the Principal Amount



In this scenario, on the Final Valuation Date, the Final Index Level is above the Protection Barrier Level. Therefore, the Redemption Amount would be equal to \$100.

Since the monthly coupon of \$0.6792 per Security is not contingent on or related to the performance of the Underlying Index, the total Interest Payments made during the term of the Securities are as follows:

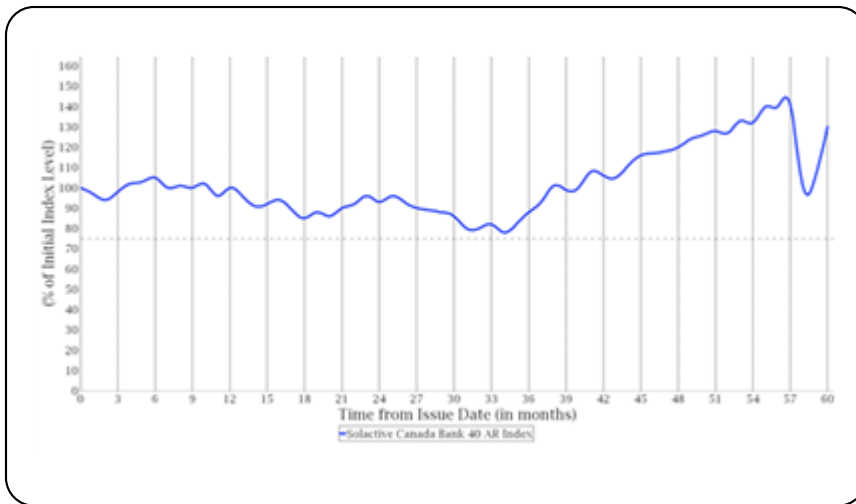
$$\begin{aligned} &\text{Principal Amount of Securities} \times 0.6792\% \text{ per Interest Period} \times 60 \text{ Interest Periods} \\ &\$100 \times 0.6792\% \times 60 = \$40.75 \end{aligned}$$

Therefore, the total amounts payable to the holder of a Security during the 60-month period from the Issue Date to the Maturity Date are:

- (a) Redemption Amount: \$100.00
- (b) Total Interest Payments made on Interest Payment Dates: \$40.75
- (c) Total amount paid over the term of the Securities: \$140.75

The equivalent annually compounded rate of return in this example is 7.08%.

Example #3 — Underlying Index Increases With Payment on the Maturity Date Equal to the Principal Amount



In this scenario, on the Final Valuation Date, the Final Index Level is above the Protection Barrier Level. Therefore, the Redemption Amount would be equal to \$100.

Since the monthly coupon of \$0.6792 per Security is not contingent on or related to the performance of the Underlying Index, the total Interest Payments made during the term of the Securities are as follows:

$$\begin{aligned} & \text{Principal Amount of Securities} \times 0.6792\% \text{ per Interest Period} \times 60 \text{ Interest Periods} \\ & \$100 \times 0.6792\% \times 60 = \$40.75 \end{aligned}$$

Therefore, the total amounts payable to the holder of a Security during the 60-month period from the Issue Date to the Maturity Date are:

- (a) Redemption Amount: \$100.00
- (b) Total Interest Payments made on Interest Payment Dates: \$40.75
- (c) Total amount paid over the term of the Securities: \$140.75

The equivalent annually compounded rate of return in this example is 7.08%.

APPENDIX C

Certain Canadian Tax Considerations

In the opinion of the Bank's counsel, Davies Ward Phillips & Vineberg LLP, the following summary fairly describes the principal Canadian federal income tax considerations under the *Income Tax Act* (Canada) (the "**Tax Act**") generally applicable to an initial purchaser of Securities under this pricing supplement who, at all relevant times, for purposes of the Tax Act, deals at arm's length with and is not affiliated with the Bank (a "**Holder**").

This summary is based upon the current provisions of the Tax Act and the regulations thereunder (the "**Regulations**"), all specific proposals to amend the Tax Act or such Regulations publicly announced by the federal Minister of Finance prior to the date hereof (the "**Proposals**") and counsel's understanding of the current administrative and assessing policies and practices of the Canada Revenue Agency ("**CRA**"). Except for the Proposals, this summary does not take into account or anticipate any changes (including retroactive changes) in the law or the administrative and assessing policies or practices of the CRA, whether by judicial, regulatory, governmental or legislative action, nor does it take into account tax laws of any province or territory of Canada, or of any jurisdiction outside Canada. Provisions of provincial income tax legislation vary from province to province in Canada and may differ from federal income tax legislation. No assurance can be given that the Proposals will be implemented in their current form, or at all. This summary assumes that the Holder will neither undertake nor arrange a transaction in respect of the Securities primarily for the purpose of obtaining a tax benefit, has not entered into a "derivative forward agreement" (as defined in the Tax Act) in respect of the Securities and that the Securities are not issued at a discount.

This summary is of a general nature only and is not intended to constitute, nor should it be relied upon or construed as, tax advice to any particular Holder, nor is it exhaustive of all possible Canadian federal income tax considerations. Holders should consult their own tax advisors as to the potential consequences to them of the acquisition, ownership and disposition of Securities having regard to their particular circumstances.

Holdings Resident in Canada

The following discussion applies to a Holder who, at all relevant times, for the purposes of the Tax Act and any applicable income tax treaty or convention, is an individual (other than a trust) who is resident (or deemed to be resident) in Canada and who acquires and holds the Securities as capital property (a "**Resident Holder**"). Certain Resident Holders who might not otherwise be considered to hold their Securities as capital property may, in certain circumstances, be entitled to have their Securities, and all other "Canadian securities" (as defined in the Tax Act) owned by such Resident Holders in the taxation year and all subsequent taxation years, treated as capital property by making the irrevocable election permitted by subsection 39(4) of the Tax Act.

Interest

The amount of any interest received or receivable (depending on the method regularly followed in computing income under the Tax Act) by a Resident Holder in a taxation year (including on redemption or repayment in full by the Bank) will be required to be included in computing the Resident Holder's income for the taxation year, except to the extent that such amount has already been included in the Resident Holder's income for that or a preceding taxation year.

Disposition of Securities

On a disposition or deemed disposition of a Security by a Resident Holder to a person (other than the Bank), the amount of any interest accrued on the Security to the time of disposition will be required to be included in computing the Resident Holder's income for the taxation year in which the disposition takes place (except to the extent that such accrued interest has already been included in the Resident Holder's income for that or a preceding taxation year), and will be excluded from the proceeds of disposition of the Security.

In addition, the Resident Holder should realize a capital gain (or capital loss) to the extent that the proceeds of disposition, net of amounts included in income as interest and any reasonable costs of disposition, exceed (or are exceeded by) the adjusted cost base of the Security to the Resident Holder. One-half of any capital gain realized by a Resident Holder must be included in the income of the Resident Holder. One-half of any capital loss realized by a Resident Holder is deductible against the taxable portion of capital gains realized in the year, in the three preceding years or in subsequent years, subject to the rules and restrictions contained in the Tax Act. Capital gains realized by an individual may give rise to a liability for alternative minimum tax.

Payment at Maturity or Repayment by the Bank

A Resident Holder who holds the Securities until maturity (or earlier repayment in full by the Bank) and who receives redemption or repayment proceeds that are less than the Principal Amount of the Securities will realize a capital loss to the

extent that the amount received at such time (otherwise than on account of interest) is less than the Resident Holder's adjusted cost base of such Securities. The income tax considerations associated with the realization of a capital loss are described above.

Holders Not Resident in Canada

The following discussion applies to a Holder who, at all relevant times, for the purposes of the Tax Act is neither resident nor deemed to be resident in Canada, deals at arm's length with any Canadian resident (or deemed Canadian resident) to whom the Holder disposes of the Securities, is neither a "specified shareholder" of the Bank nor a person who does not deal at arm's length with a specified shareholder of the Bank for purposes of the "thin capitalization" rule contained in subsection 18(4) of the Tax Act, does not use or hold and is not deemed to use or hold the Securities in the course of carrying on a business in Canada and is not an insurer carrying on an insurance business in Canada and elsewhere (a "**Non-Resident Holder**").

Interest paid or credited or deemed to be paid or credited on the Securities (including any interest deemed to be paid in certain cases involving the assignment or other transfer of a Security to a resident or deemed resident of Canada) to a Non-Resident Holder will not be subject to Canadian non-resident withholding tax unless any portion of such interest is contingent or dependent on the use of or production from property in Canada or is computed by reference to revenue, profit, cash flow, commodity price or any other similar criterion or by reference to dividends paid or payable to shareholders of any class of shares of the capital stock of a corporation ("**Participating Debt Interest**"). Having regard to the terms of the Securities, interest paid or credited or deemed to be paid or credited on the Securities should not be considered to be Participating Debt Interest.

There should be no other taxes on income (including taxable capital gains) payable by a Non-Resident Holder in respect of a Security.

Eligibility for Investment

The Securities, if issued on the date of this pricing supplement, would be qualified investments (for purposes of the Tax Act) for trusts governed by registered retirement savings plans ("**RRSPs**"), registered retirement income funds ("**RRIFs**"), tax-free savings accounts ("**TFSA**s"), registered disability savings plans ("**RDSPs**"), registered education savings plans ("**RESPs**") and deferred profit sharing plans ("**DPSPs**"), each within the meaning of the Tax Act (other than a DPSP to which payments are made by the Bank or a corporation or partnership with which the Bank does not deal at arm's length within the meaning of the Tax Act).

Notwithstanding the foregoing, if Securities are "prohibited investments" (as that term is defined in the Tax Act) for an RRSP, RRIF, TFSA, RDSP or RESP, the annuitant of the RRSP or RRIF, the holder of the TFSA or RDSP, or the subscriber of the RESP, as the case may be (each a "**Plan Holder**"), will be subject to a penalty tax as set out in the Tax Act. Securities will be prohibited investments for an RRSP, RRIF, TFSA, RDSP or RESP of a Plan Holder who has a "significant interest" (as defined in the Tax Act for purposes of the prohibited investment rules) in the Bank or who does not deal at arm's length, within the meaning of the Tax Act, with the Bank.