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.

January 3, 2023

Royal Bank of Canada
Senior Note Program
Unit Linked Securities
Maximum $20,000,000 (200,000 Debt Securities)
RBC iShares NASDAQ 100 Index ETF Autocallable 10.25%
Securities (CAD), Series 144
Due January 21, 2028
Non-Principal Protected Debt Securities

Royal Bank of Canada (the "**Bank**") is offering up to $20,000,000 of RBC iShares NASDAQ 100 Index ETF Autocallable 10.25% Securities (CAD), Series 144 (which we refer to as the "**Debt 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 their investment and the Interest Payment (defined herein) will not be made on the Debt Securities, because they believe that the Closing Price (defined herein) of the Underlying Securities (defined herein) will be greater than or equal to the Autocall Redemption Price (defined herein) on an Observation Date (defined herein), and, in any event, greater than or equal to the Protection Barrier Price (defined herein) on the Final Valuation Date (defined herein). Payment at maturity will be based on the price performance of the units of the iShares NASDAQ 100 Index ETF (CAD-Hedged) (the "**ETF**"). The Debt Securities will be redeemed and the holders of the Debt Securities will receive an Interest Payment on the applicable Interest Payment Date (defined herein) if there is an Autocall Redemption Event (defined herein) on the immediately preceding Observation Date. The return on the Debt Securities is limited; even if the Debt Securities are not redeemed prior to maturity, an Autocall Redemption Event occurs on the final Observation Date and the Final Closing Price (defined herein) is greater than or equal to the Autocall Redemption Price, the maximum return on the Debt Securities would be equal to $51.25 per Debt Security plus an amount equal to 5.00% of any Underlying Securities Return (defined herein) in excess of $51.25.

The initial estimated value of the Debt Securities as of December 23, 2022 was $93.70 per Debt 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 Debt 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 Debt 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 equity, unit and debt linked securities that we may offer under our Senior Note Program dated March 28, 2022, as supplemented November 11, 2022 (the "**product supplement**").

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

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

An investment in the Debt Securities involves risks. An investment in the Debt Securities is not the same as a direct investment in the Underlying Securities and investors have no rights with respect to the Underlying Securities, the ETF or the securities comprising the Tracked Index (defined herein). The Debt Securities are considered to be "specified derivatives" under applicable Canadian securities laws. If you purchase Debt Securities, you will be exposed to changes in the value of the Underlying Securities and fluctuations in interest rates, among other factors. Price changes may be volatile and an investment in the Debt Securities may be considered to be speculative. Since the Debt Securities are not principal protected and the Principal Amount (defined herein) will be at risk, you could lose substantially all of your investment. See "Risk Factors".

Price: $100 per Debt Security

Minimum Subscription: $5,000 (50 Debt Securities)

	Price to public	**Selling Commissions and Dealer's fee**[(1)]	**Net proceeds to the Bank**
Per Debt Security	$100.00	$2.50	$97.50
Total[(2)]	$20,000,000	$500,000	$19,500,000

(1) A commission of 2.50% of the Principal Amount of Debt Securities issued under this offering will be paid to the Dealers (defined below) for further payment to representatives, including representatives employed by the Dealers, whose clients purchase the Debt Securities. An agency fee will also 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 Debt Securities issued under this offering for acting as independent agent.

(2) Reflects the maximum offering size of the Debt 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 Debt 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 Debt Securities will not be listed on any stock exchange. Debt 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 Debt Securities. The Debt Securities will also be subject to specified early trading charges, depending on when the Debt Securities are sold. There is no assurance that a secondary market for the Debt 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 is a registered trademark of Royal Bank of Canada.

Prospectus for Debt Securities

Debt Securities described in this pricing supplement will be issued under our Senior Note Program and will be unsecured, unsubordinated debt obligations. The Debt 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 Debt 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 Debt Securities issued hereunder. Other documents are also incorporated or deemed to be incorporated by reference into the base shelf prospectus and reference should be made to the base shelf prospectus for full particulars.

Marketing Materials

The version of the summary for the Debt 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 January 3, 2023 is deemed to be incorporated by reference into the base shelf prospectus solely for the purpose of our Senior Note Program and the Debt 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 Debt 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 Debt 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 year ended October 31, 2022 (the "**2022 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 HSBC Bank Canada, the Strategic priorities and Outlook sections in the 2022 Management's Discussion and Analysis for each of our business segments, the risk environment including our credit risk, market risk, liquidity and funding risk, the direction of the coronavirus (COVID-19) pandemic and its potential impact on our business operations, financial results, condition and objectives and on the global economy and financial market conditions, our climate- and sustainability-related beliefs, targets and goals (including our net-zero and sustainable finance commitments), 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, that our financial performance, environmental & social or other objectives, vision and strategic goals will not be achieved, and that our actual results may differ materially from such predictions, forecasts, projections, expectations or conclusions. 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, model, legal and regulatory environment, systemic risks and other risks discussed in the risk sections of the 2022 Management's Discussion and Analysis incorporated by reference herein; including business and economic conditions in the geographic regions in which we operate, Canadian housing and household indebtedness, information technology and cyber risks, geopolitical uncertainty, environmental and social risk (including climate change), digital disruption and innovation, privacy, data and third-party related risks, regulatory changes, culture and conduct risks, 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. Additional factors that could cause actual results to differ materially from the expectations in such forward-looking statements can be found in the risk section of the 2022 Management's Discussion and Analysis.

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 Debt 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 headings in our 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 of the 2022 Management's Discussion and Analysis incorporated by reference in this prospectus.

Royal Bank of Canada
Senior Note Program
Unit Linked Securities
Maximum $20,000,000 (200,000 Debt Securities)
RBC iShares NASDAQ 100 Index ETF Autocallable 10.25% Securities (CAD), Series 144
Due January 21, 2028
Non-Principal Protected Debt 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 Debt Securities. See "Plan of Distribution" in the program supplement.
Issue:	RBC iShares NASDAQ 100 Index ETF Autocallable 10.25% Securities (CAD), Series 144 due January 21, 2028.
Fundserv Code:	RBC3598
Objective of the Debt Securities:	The Debt Securities have been designed for investors who are prepared and can afford to take the risk that they will lose substantially all of their investment and that the Interest Payment (defined below) will not be made on the Debt Securities, because they believe that the Closing Price (defined below) of the Underlying Securities (defined below) will be greater than or equal to the Autocall Redemption Price (defined below) on an Observation Date (defined below), and, in any event, greater than or equal to the Protection Barrier Price (defined below) on the Final Valuation Date (defined below). The Debt Securities will be redeemed and the holders of the Debt Securities will receive an Interest Payment on the applicable Interest Payment Date (defined below) if there is an Autocall Redemption Event (defined below) on the immediately preceding Observation Date.
Issue Price:	The Debt Securities will be issued at a price equal to their Principal Amount (defined below).
Minimum Investment:	50 Debt Securities or $5,000.
Denomination:	Debt Securities are issuable in denominations of $100 (the "**Principal Amount**") and in minimum increments of $100.
Issue Date:	January 20, 2023 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:	January 21, 2028 (approximately a five-year term), subject to earlier redemption on an Autocall Redemption Event or earlier repayment in full on an Extraordinary Event. See "Description of the Equity, Unit and Debt Linked Securities – Maturity Date and Amount Payable" in the product supplement.
Principal at Risk Securities:	All but 1% of the Principal Amount of the Debt Securities is fully exposed. You could lose substantially all of your investment. See "Description of the Equity, Unit and Debt Linked Securities — Principal at Risk Securities" and "Risk Factors" in the product supplement.
Underlying Securities:	The return on the Debt Securities is linked to the price performance of the units (the "**Underlying Securities**" and each, an "**Underlying Security**") of the iShares NASDAQ 100 Index ETF (CAD-Hedged) (the "**ETF**") on the Initial Valuation Date (defined below) and the Observation Dates, including the Final Valuation Date. See "Description of the Equity, Unit and Debt Linked Securities – Underlying Securities and Underlying Security Issuers" in the product supplement. See Appendix A to this pricing supplement for summary information regarding the ETF.

Debt Securities do not represent an interest in the Underlying Securities or in the component securities comprising the ETF's investment portfolio. The ETF invests primarily in and holds the securities of the constituents of the NASDAQ-100® Currency Hedged CAD Index (the "**Tracked Index**"). Holders of the Debt Securities will have no right or entitlement to the Underlying Securities, the ETF or the securities comprising the Tracked Index, including, without limitation, redemption rights (if any), voting rights or rights to receive dividends or other distributions paid on any of such securities (the annual dividend yield on the Underlying Securities as of December 23, 2022 was 0.281% representing an aggregate dividend yield of approximately 1.413% compounded annually over the five-year term, on the assumption that the dividend yield remains constant). There is no requirement for the Bank to hold any interest in the Underlying Securities or in the securities comprising the Tracked Index.

This pricing supplement has been prepared for the sole purpose of assisting prospective investors in making an investment decision with respect to the Debt Securities. This pricing supplement relates only to the Debt Securities offered hereby and does not relate to the Underlying Securities, the ETF and/or the Tracked Index. The Bank and the Dealers have not verified the accuracy or completeness of any information pertaining to the ETF or the Tracked Index or determined whether there has been any omission by the manager of the ETF or the Tracked Index Sponsor (as defined in the product supplement) 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 manager of the ETF or the Tracked 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 ETF, the Tracked Index, the manager of the ETF or the Tracked Index Sponsor is accurate or complete. Prospective investors should independently investigate the ETF, the Tracked Index, the manager of the ETF and the Tracked Index Sponsor and decide whether an investment in the Debt Securities is appropriate. Neither the manager of the ETF nor the Tracked Index Sponsor has participated in the preparation of this pricing supplement and the Debt Securities are not in any way sponsored, endorsed, sold or promoted by the manager of the ETF or the Tracked Index Sponsor. See "Description of the Equity, Unit and Debt Linked Securities – Underlying Securities and Underlying Security Issuers" in the product supplement.

Initial Closing Price: The "**Initial Closing Price**" is the Closing Price, on January 16, 2023 (the "**Initial Valuation Date**").

Protection Barrier Price: The "**Protection Barrier Price**" is 75.00% of the Initial Closing Price.

Final Closing Price: The "**Final Closing Price**" is (i) if an Autocall Redemption Event occurs, the Closing Price on the applicable Observation Date or (ii) if no Autocall Redemption Event occurs, the Closing Price on January 18, 2028 (the "**Final Valuation Date**").

Closing Price: The "**Closing Price**" on any Exchange Day (defined in the product supplement) is equal to the official closing price of the Underlying Securities, as announced by the Toronto Stock Exchange (the "**TSX**"), on such Exchange Day. The official closing price of the Underlying Securities is available from other sources, such as Bloomberg; however, neither the Bank nor the Dealers make any representation as to the accuracy of such information and all calculations regarding the Closing Price will be made by the Calculation Agent.

Observation Dates: An "**Observation Date**" for the purposes of determining whether an Autocall Redemption Event has occurred and whether the Interest Payment will be payable will occur annually on the dates specified below in each year that the Debt Securities are outstanding, from and including January 17, 2024 to and including the Final Valuation Date. If any such Observation Date is not an Exchange Day, it shall be postponed to the next succeeding Exchange Day.

Provided that an Autocall Redemption Event does not occur prior to the Final Valuation Date, the Bank intends the Observation Dates to be:

	January 17, 2024	January 17, 2025
	January 20, 2026	January 19, 2027
	January 18, 2028 (the Final Valuation Date)	

Interest Payment Dates:

The "**Interest Payment Date**" for the Interest Payment, if any, will occur annually on the dates specified below in each year that the Debt Securities are outstanding, from and including January 22, 2024 to and including the Maturity Date.

Provided that an Autocall Redemption Event does not occur prior to the Final Valuation Date, the Bank intends the Interest Payment Dates to be:

January 22, 2024	January 22, 2025
January 23, 2026	January 22, 2027
January 21, 2028 (the Maturity Date)	

Autocall Redemption Event:

An "**Autocall Redemption Event**" will occur if the Closing Price on an Observation Date is greater than or equal to the Initial Closing Price (the "**Autocall Redemption Price**"). On the next succeeding Interest Payment Date following the occurrence of an Autocall Redemption Event (the "**Autocall Redemption Date**") the Debt Securities will be redeemed for an amount equal to the Principal Amount thereof (the "**Autocall Redemption Amount**").

If an Autocall Redemption Event occurs, in addition to the Autocall Redemption Amount, an interest payment (the "**Interest Payment**") on the Debt Securities will be payable on the next succeeding Autocall Redemption Date, in arrears, as follows:

(a) if an Autocall Redemption Event occurs on the first Observation Date, the Interest Payment payable per Debt Security will be equal to the sum of (i) $10.25 and (ii) if the Underlying Securities Return (defined below) exceeds $10.25, 5.00% × (Underlying Securities Return - $10.25);

(b) if an Autocall Redemption Event occurs on the second Observation Date, the Interest Payment payable per Debt Security will be equal to the sum of (i) $20.50 and (ii) if the Underlying Securities Return exceeds $20.50, 5.00% × (Underlying Securities Return - $20.50);

(c) if an Autocall Redemption Event occurs on the third Observation Date, the Interest Payment payable per Debt Security will be equal to the sum of (i) $30.75 and (ii) if the Underlying Securities Return exceeds $30.75, 5.00% × (Underlying Securities Return - $30.75);

(d) if an Autocall Redemption Event occurs on the fourth Observation Date, the Interest Payment payable per Debt Security will be equal to the sum of (i) $41.00 and (ii) if the Underlying Securities Return exceeds $41.00, 5.00% × (Underlying Securities Return - $41.00); or

(e) if an Autocall Redemption Event occurs on the Final Valuation Date, the Interest Payment payable per Debt Security on the Maturity Date will be equal to the sum of (i) $51.25 and (ii) if the Underlying Securities Return exceeds $51.25, 5.00% × (Underlying Securities Return - $51.25).

If an Autocall Redemption Event does not occur on an Observation Date, no Interest Payment will be payable on the Debt Securities on the next succeeding Autocall Redemption Date.

RBC DS intends to publish whether there has been an Autocall Redemption Event on each Observation Date on its website at www.rbcnotes.com.

Payment at Maturity:

On the Maturity Date, if an Autocall Redemption Event has not previously occurred, the amount payable (the "**Final Redemption Amount**") for each $100 Principal Amount per Debt Security will be equal to:

(a) if the Final Closing Price is greater than or equal to the Protection Barrier Price, $100; or

(b) if the Final Closing Price is less than the Protection Barrier Price, an amount equal to the Underlying Securities Return, but in any event not less than $1.00. As a result, the Final Redemption Amount will not be determinable before the Final Valuation Date. See "Risk Factors" below.

Underlying Securities Return:	"**Underlying Securities Return**" means (i) for the purpose of calculating the Final Redemption Amount, $\$100 \times (X_f / X_i)$ and (ii) for all other purposes, $((X_f / X_i) - 1) \times \$100$. where: "$\mathbf{X_f}$" means the Final Closing Price, and "$\mathbf{X_i}$" means the Initial Closing Price.
Sample Calculations:	See Appendix B to this pricing supplement for sample calculations of the Final Redemption Amount or Autocall Redemption Amount (in the event of an Autocall Redemption Event) and the Interest Payment payable on the Debt Securities (in the event of an Autocall Redemption Event).
Issuer Credit Rating:	Moody's: Aa1 Standard & Poor's: AA- DBRS: AA The Debt Securities themselves have not been and will not be rated. See "Description of the Securities — Ratings" in the program supplement.
Extraordinary Events:	Determination of the Closing Price, including the Initial Closing Price and/or the Final Closing Price, and the Final Redemption Amount may be postponed, or the Bank can accelerate determination of the Final Closing Price and the Final Redemption Amount and repay the Debt 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 Debt Securities as it determines to be appropriate, acting in good faith, to account for the economic effect of such event on the Debt 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 Equity, Unit and Debt Linked Securities — Extraordinary Events" in the product supplement.
Summary of Fees and Expenses:	A commission of 2.50% of the Principal Amount of Debt Securities issued under this offering will be paid to the Dealers for further payment to representatives, including representatives employed by the Dealers, whose clients purchase the Debt Securities. An agency fee will also 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 Debt Securities issued under this offering for acting as independent agent. The selling commissions and the agency fee are indirectly borne by holders of the Debt Securities. There are no fees directly payable by a holder of Debt Securities. See "Description of the Securities — Summary of Fees and Expenses" in the program supplement. An early trading charge may also apply. See "Secondary Market" below.
Fees Affecting Closing Price of Underlying Securities	The Closing Price of the Underlying Securities will be net of the fees and expenses charged by or assumed by the ETF, which will therefore be indirectly assumed by holders of the Debt Securities. Such fees and expenses include annual management fees payable by the ETF to its trustee and/or investment advisor and other operating expenses of the ETF. See the disclosure of the fees and expenses in the ETF's continuous disclosure materials (which are not incorporated by reference herein). For the year ended June 30, 2022, the management expense ratio, which includes the management fee payable by the ETF to BlackRock Asset Management Canada Limited (the "**Adviser**") and/or its affiliates for acting as trustee and/or manager of the ETF, represented an annual rate of 0.39% of the ETF's average daily net asset value during the year.
Eligibility for Investment:	Eligible for RRSPs, RRIFs, 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 Debt 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 return on the Debt Securities is unknown and subject to many variables, including interest rate fluctuations and changes in the Underlying Security prices. You should independently determine, with your own advisors, whether an investment in the Debt Securities is suitable for you having regard to your own investment objectives and expectations.

Limited Upside Participation by the Debt Securities

The return on the Debt Securities is limited; even if the Closing Price is less than the Autocall Redemption Price on each of the first four Observation Dates and the Final Closing Price is greater than or equal to the Autocall Redemption Price, the maximum return on the Debt Securities would be equal to $51.25 per Debt Security plus an amount equal to 5.00% of any Underlying Securities Return in excess of $51.25. The Debt Securities will only participate in this 5.00% upside performance of the Underlying Securities in excess of $51.25.

Uncertain Return Until Final Valuation Date

The return, if any, on the Debt Securities will be uncertain until the Final Valuation Date, unless the Debt Securities are called for redemption prior to the Final Valuation Date. Whether there is a return on the Debt Securities will depend on the Closing Price on the Observation Dates. No Interest Payment will be made on an Interest Payment Date unless there is an Autocall Redemption Event on the immediately preceding Observation Date. There can be no assurance that the Debt Securities will generate a positive return or that the objectives of the Debt Securities will be achieved. Holders of the Debt Securities may not be repaid the amount they invested in the Debt Securities (other than $1.00 per Debt Security), depending on the price performance of the Underlying Securities. Historical prices of the Underlying Securities should not be considered as an indication of the future price performance of the Underlying Securities. 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 Return on or Trading Value of the Debt 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 Securities changes over the term of the Debt Securities, the trading value of the Debt Securities may be adversely affected. In addition, if the Closing Price on an Observation Date is less than the Autocall Redemption Price, you will not receive an Interest Payment on the relevant Interest Payment Date and if there is no early redemption and the Final Closing Price is less than the Protection Barrier Price, the Final Redemption Amount will be reduced such that you will receive less than the Principal Amount on the Maturity Date. In periods of high volatility, the likelihood of an investor not receiving the Interest Payment or a return of the full Principal Amount of the Debt Securities increases.

The Debt Securities May be Redeemed Prior to the Maturity Date

The Debt Securities will be automatically redeemed by the Bank on the Autocall Redemption Date if the Closing Price on an Observation Date is greater than or equal to the Autocall Redemption Price. In such event, investors will receive an Autocall Redemption Amount equal to the Principal Amount of the Debt Securities and will also receive the applicable Interest Payment. If the Debt Securities are redeemed by the Bank prior to maturity, investors will not be entitled to receive any future Interest Payment that they may have been entitled to receive if the Debt Securities had not been redeemed by the Bank.

The Initial Estimated Value of the Debt Securities Is Less than the Price to the Public and May not Reflect the Secondary Market Price, if any, of the Debt 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 Debt Securities in any secondary market (if any exists) at any time. If you attempt to sell the Debt 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 price of the Underlying

Securities and the inclusion in the price to the public of the selling commissions and the agency fee, as well as an amount retained by the Bank to compensate it for the creation, issuance and maintenance of the Debt 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 Debt Securities, could reduce the price at which you may be able to sell the Debt Securities in any secondary market and will affect the value of the Debt 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 Debt Securities prior to maturity may be less than your original purchase price. The Debt Securities are not designed to be short-term trading instruments. Accordingly, you should be able and willing to hold your Debt Securities to maturity.

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

The initial estimated value of the Debt Securities is based on the value of the Bank's obligation to make the payments on the Debt Securities. The return on the Debt 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 Debt Securities is equal to the fair value of the Debt 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 and any earlier call date of the Debt 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 Debt Securities or similar securities at a price that is significantly different than the Bank does. The value of the Debt 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 Debt Securities in the secondary market, if any, should be expected to differ materially from the initial estimated value of the Debt Securities.

Preparation of Initial Estimated Value:

The Debt Securities are debt securities of the Bank, the return on which is linked to the price performance of the Underlying Securities. In order to satisfy the Bank's payment obligations under the Debt 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 Securities, and the term to maturity and any earlier call date of the Debt Securities.

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

The Bank has adopted written policies and procedures for determining the fair value of Debt 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 Debt 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 Debt Securities. The Debt Securities may be suitable for: • investors seeking an investment product with exposure to the Underlying Securities • investors who believe that the Closing Price will be greater than or equal to the Autocall Redemption Price on an Observation Date • investors who believe that the Final Closing Price will not be below the Protection Barrier Price • investors who are willing and can afford to risk substantially all of the principal amount of their investment • investors looking for the potential to earn a return linked to the price performance of the Underlying Securities and who are prepared to assume the risks associated with an investment linked to the price performance of the Underlying Securities • investors with an investment horizon equal to the term to maturity of the Debt Securities who are prepared to hold the Debt Securities until maturity, but who are willing to assume the risk that the Debt Securities will be redeemed prior to the Maturity Date if the Closing Price is greater than or equal to the Autocall Redemption Price on one of the first four Observation Dates • investors who are prepared to take the risk that the Interest Payment will not be paid on the Debt Securities • investors who understand that the potential return on the Debt Securities is limited; the maximum return on the Debt Securities is equal to $51.25 per Debt Security plus an amount equal to 5.00% of any Underlying Securities Return in excess of $51.25
Book-entry Only Securities:	The Debt 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 Debt 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 Autocall Redemption Amount and the Interest Payment (in the event of an Autocall Redemption Event) will be paid by the Bank to the registered holder.
Listing:	The Debt Securities will not be listed on any stock exchange. See "Risk Factors" in the product supplement.
Secondary Market:	Debt Securities may be purchased through dealers and other firms that facilitate purchase and related settlement using the Fundserv network. Debt 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 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 Debt Securities, less an early trading charge as specified below. 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 Debt Securities Is Less than the Price to the Public and May not Reflect the Secondary Market Price, if any, of the Debt Securities" above and "Secondary Market for Securities – Fundserv" in the program supplement. Information regarding the Closing Price, the Autocall Redemption Price, the Protection Barrier Price and the daily closing price for the Debt Securities may be accessed at www.rbcnotes.com. There is no assurance that a secondary market for the Debt Securities will develop or be sustained. See "Secondary Market for Securities" in the program supplement.

If a Debt Security is sold within the first 270 days from the Issue Date, the proceeds from the sale of the Debt Securities will be reduced by an early trading charge ("**Early Trading Charge**") equal to a percentage of the Principal Amount determined as set out below.

If Sold Within the Following No. of Days from Issue Date	Early Trading Charge (% of Principal Amount)
1 - 45 days	3.00%
46 - 90 days	2.75%
91 - 135 days	2.50%
136 - 180 days	2.00%
181 - 225 days	1.50%
226 - 270 days	1.00%
Thereafter	Nil

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 Debt Securities who acquires Debt Securities from the Bank on the Issue Date and who, at all relevant times, for purposes of the *Income Tax Act* (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 Debt Securities as capital property is referred to herein as a "**Resident Holder**". A Resident Holder will be required to include in income, on a transfer of a Debt Security, the excess, if any, of the price for which it was so transferred by the Resident Holder over its principal amount at the time of the transfer. Furthermore, a Resident Holder will be required to include in computing income any Interest Payment received or receivable on the Debt Securities. If, on maturity or other disposition (including on early redemption or repayment in full by the Bank), such a Resident Holder receives an amount that is less than the adjusted cost base of the Debt Securities, such holder will realize a capital loss equal to the shortfall. See "Certain Canadian Tax Considerations" in Appendix C. **Potential purchasers of Debt Securities should consult with their own tax advisors having regard to their particular circumstances.**

APPENDIX A

Summary Information Regarding the ETF

We have derived all information contained in this pricing supplement regarding the ETF from publicly available information. We make no representations or warranty as to the accuracy or completeness of the information derived from these public sources. Such information reflects the policies of, and is subject to change by BlackRock Asset Management Canada Limited (the "**Adviser**"). The ETF is an exchange-traded fund managed by the Adviser or its affiliate and created under the laws of the Province of Ontario whose units trade on the below-mentioned exchange under the below-mentioned ticker symbol. The Adviser is a registered investment company that is the investment adviser of numerous separate exchange-traded funds, including the ETF. Information provided to or filed with the securities regulators by the Adviser pursuant to securities legislation can be located at www.sedar.com. In addition, information about the Adviser and the ETF may be obtained from other sources including, but not limited to, press releases, newspaper articles and other publicly disseminated documents and the Adviser's website at www.blackrock.com. We make no representation or warranty as to the accuracy or completeness of such information.

iShares NASDAQ 100 Index ETF (CAD-Hedged)

Tracked Index	NASDAQ-100® Currency Hedged CAD Index
Adviser	BlackRock Asset Management Canada Limited
Country	Canada
Current Exchange	TSX
Ticker	XQQ
Closing Price of Underlying Securities (December 23, 2022)	$84.70

Principal Investment Strategies

The iShares NASDAQ 100 Index ETF (CAD-Hedged) seeks to provide long-term capital growth by replicating, to the extent possible, the performance of the NASDAQ-100® Currency Hedged CAD Index, net of expenses. Under normal market conditions, the iShares NASDAQ 100 Index ETF (CAD-Hedged) will primarily invest in U.S. equity securities.

The iShares NASDAQ 100 Index ETF (CAD-Hedged)'s current principal investment strategy is to employ a replicating strategy. In addition to or as an alternative to this strategy, the iShares NASDAQ 100 Index ETF (CAD-Hedged) may also invest by employing a sampling strategy, by investing in one or more iShares exchange-traded funds and/or through the use of derivatives. The iShares NASDAQ 100 Index ETF (CAD-Hedged) employs a currency hedging strategy with respect to U.S. dollar currency exposure.

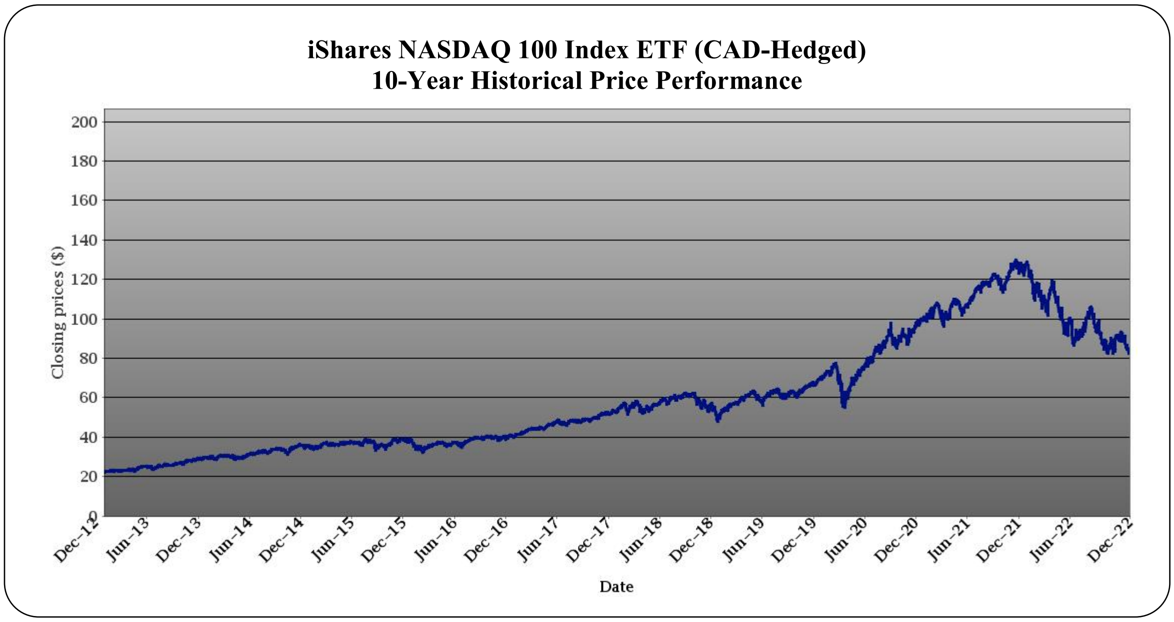
NASDAQ-100® Currency Hedged CAD Index

The NASDAQ-100® Currency Hedged CAD Index is provided by the Nasdaq, Inc. and includes 100 of the largest domestic and international non-financial securities listed on the NASDAQ Stock Market based on market capitalization. The NASDAQ-100® Currency Hedged CAD Index reflects companies across major industry groups including computer, biotechnology, healthcare, telecommunications and transportation. It does not contain securities of financial companies including investment companies. The NASDAQ-100® Currency Hedged CAD Index is calculated using a modified capitalization-weighted methodology. The methodology is expected to retain, in general, the economic attributes of capitalization-weighting while providing enhanced diversification. The NASDAQ-100® Currency Hedged CAD Index is hedged to Canadian dollars on a monthly basis. The composition of the NASDAQ-100® Currency Hedged CAD Index is generally updated annually and constituent weights are generally updated quarterly.

Further information about the NASDAQ-100® Currency Hedged CAD Index is available from Nasdaq, Inc. on its website at https://indexes.nasdaqomx.com and information from this website is not incorporated by reference into this pricing supplement.

Historical Price Performance

The following chart sets forth the historical price performance of the units of the iShares NASDAQ 100 Index ETF (CAD-Hedged) for the period from December 31, 2012 to December 30, 2022. Historical price performance does not take into account distributions or dividends paid on the Underlying Securities.



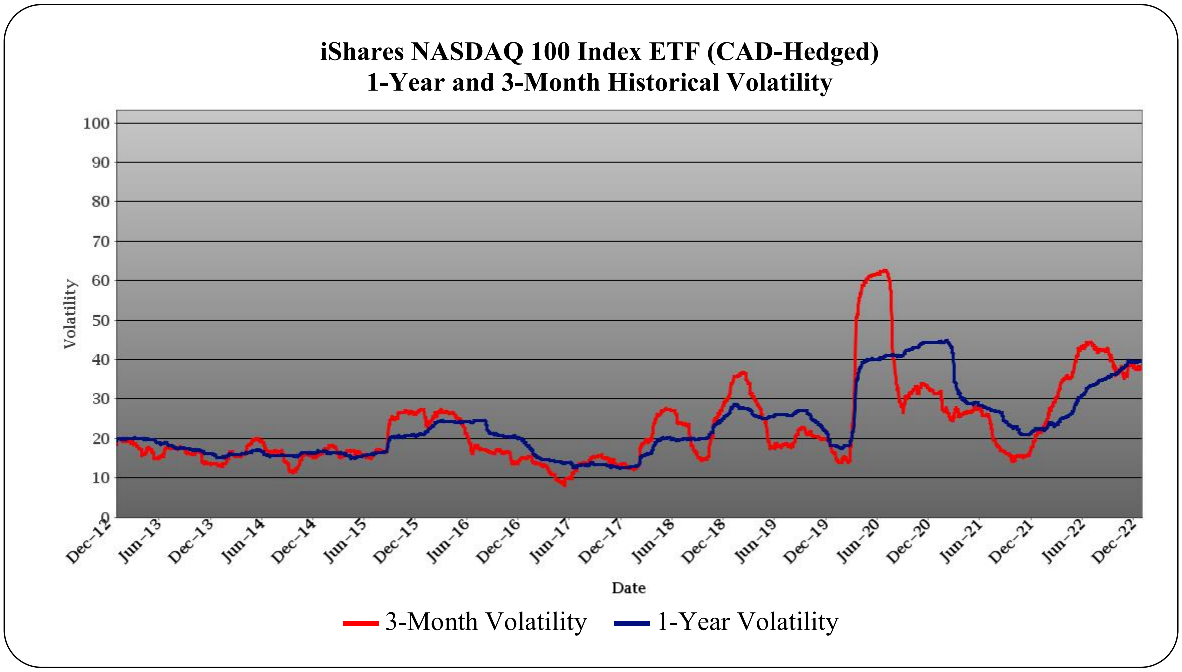
Historical price performance of the units of iShares NASDAQ 100 Index ETF (CAD-Hedged) will not necessarily predict future price performance of the units of iShares NASDAQ 100 Index ETF (CAD-Hedged) or the Debt Securities. The source of the data displayed in this chart is Bloomberg L.P. and its accuracy cannot be guaranteed.

Historical annual percentage change of the units of iShares NASDAQ 100 Index ETF (CAD-Hedged)										
Year	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Percentage change (%)	36.36	18.13	7.87	5.27	31.09	-2.81	36.80	44.81	26.50	-33.95

Source: Bloomberg L.P.: Measures annualized period as of December 31 of the previous year.

The following chart sets forth the one-year and three-month historical volatility of the units of the iShares NASDAQ 100 Index ETF (CAD-Hedged) for the period from December 31, 2012 to December 30, 2022.

Historical volatility is not a guarantee of future volatility.



The source of the data displayed in this chart is Bloomberg L.P. and its accuracy cannot be guaranteed.

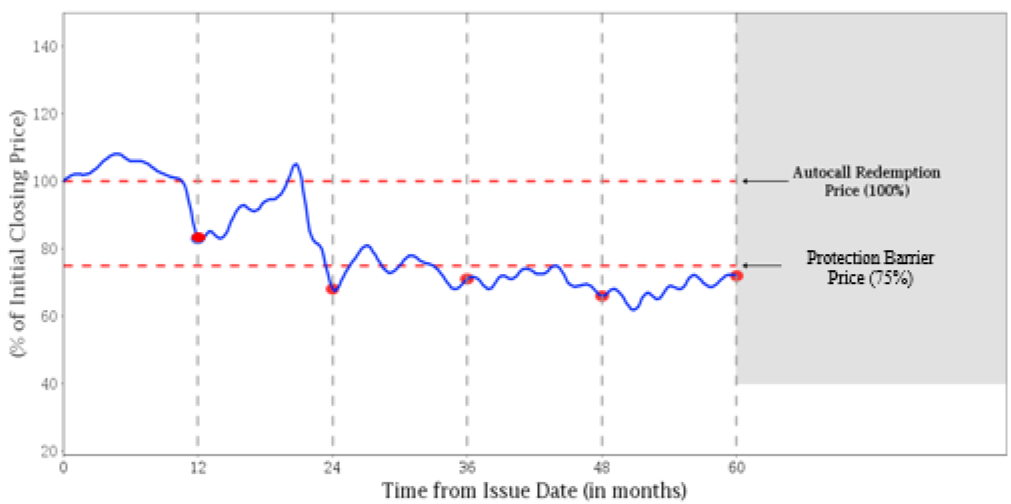
Volatility is the term used to describe the magnitude and frequency of the changes in a security's value over a given time period. A higher volatility means that a security's value can potentially be spread out over a larger range of values. This means that the price of the security can change dramatically over a short time period in either direction. A lower volatility means that a security's value does not fluctuate dramatically, but changes in value at a steady pace over a period of time.

APPENDIX B

Sample Calculations of Final Redemption Amount or Autocall Redemption Amount and Interest Payment

The examples set out below are included for illustration purposes only. The price performance of the Underlying Securities used to illustrate the calculation of the Final Redemption Amount or Autocall Redemption Amount and the Interest Payment over the term of the Debt Securities is not an estimate or forecast of the price performance of the Underlying Securities or the Debt Securities. All examples assume that a holder of the Debt Securities has purchased Debt Securities with an aggregate principal amount of $100 and that no Extraordinary Event has occurred. All examples assume an Autocall Redemption Price of 100.00% of the Initial Closing Price and a Protection Barrier Price of 75.00% of the Initial Closing Price. For convenience, each vertical line in the charts below represents both a hypothetical Observation Date and the next succeeding Interest Payment Date. All dollar amounts are rounded to the nearest whole cent.

Example #1 — Loss Scenario with Payment on the Maturity Date at Less Than the Principal Amount



- ● Indicates Observation Dates on which the Autocall Redemption Price is breached; therefore there is no Autocall Redemption Event and no Interest Payment will occur on the related Interest Payment Date.
- — iShares NASDAQ 100 Index ETF (CAD-Hedged)

In this scenario, there is no Observation Date on which the Closing Price is greater than or equal to the Autocall Redemption Price and, accordingly, the Debt Securities would not be redeemed. On the Final Valuation Date, the Final Closing Price is below the Protection Barrier Price.

(i) Interest Payment

In this example, no Autocall Redemption Event would occur because the Closing Price at each Observation Date is below the Autocall Redemption Price. Therefore, an Interest Payment would not be payable on any Interest Payment Date.

(ii) Final Redemption Amount

In this example, the Initial Closing Price (X_i) is $84.70 and the Final Closing Price (X_f) is $61.83. Therefore, the Final Redemption Amount is as follows:

$$\$100 \times (X_f / X_i)$$

$$\$100 \times (\$61.83 / \$84.70) = \$73.00$$

Therefore, the total amounts payable per Debt Security from the Issue Date to the Maturity Date are:

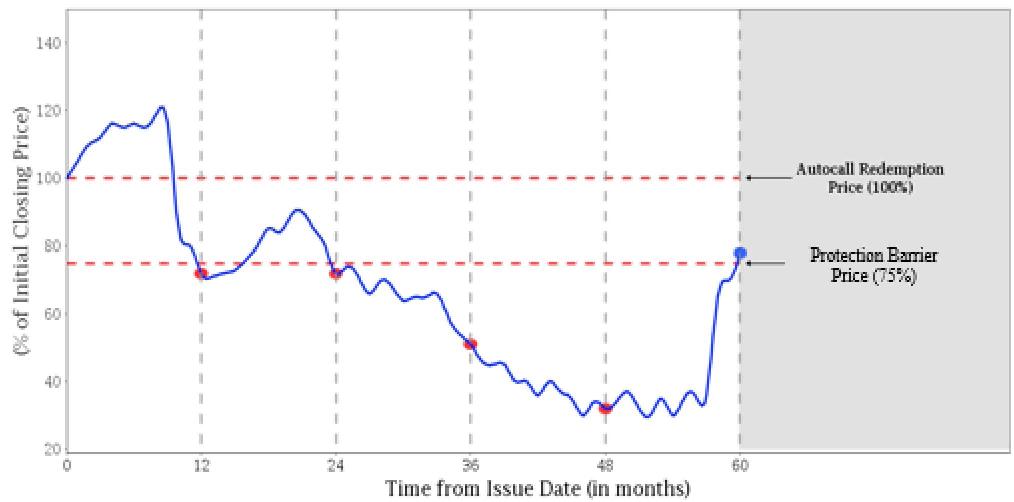
(a) Interest Payment: $0.00

(b) Final Redemption Amount: $73.00

(c) Total amount paid over the term of the Debt Securities: $73.00

The equivalent annually compounded rate of return in this example is -6.10%.

Example #2 — Scenario with Payment on the Maturity Date at the Principal Amount



- Indicates Observation Dates on which the Autocall Redemption Price is breached; therefore there is no Autocall Redemption Event and no Interest Payment will occur on the related Interest Payment Date.
- Indicates final Observation Date.
- iShares NASDAQ 100 Index ETF (CAD-Hedged)

In this scenario, there is no Observation Date on which the Closing Price is greater than or equal to the Autocall Redemption Price and, accordingly, the Debt Securities would not be redeemed. On the Final Valuation Date, the Final Closing Price is greater than or equal to the Protection Barrier Price but is below the Autocall Redemption Price.

(i) Interest Payment

In this example, no Autocall Redemption Event would occur because the Closing Price at each Observation Date is below the Autocall Redemption Price. Therefore, an Interest Payment would not be payable on any Interest Payment Date.

(ii) Final Redemption Amount

In this example, the Final Closing Price is greater than or equal to the Protection Barrier Price. Therefore, the Final Redemption Amount is $100.00.

Therefore, the total amounts payable per Debt Security from the Issue Date to the Maturity Date are:

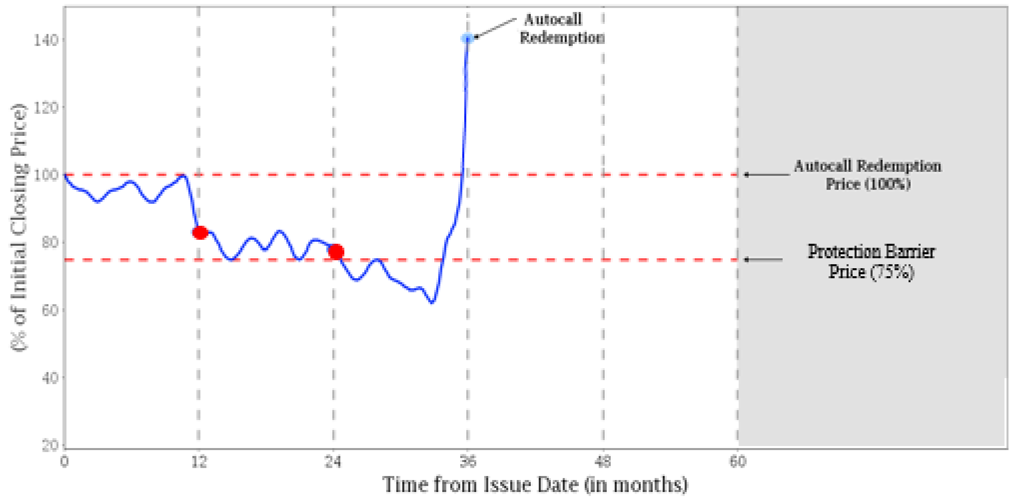
(a) Interest Payment: $0.00

(b) Final Redemption Amount: $100.00

(c) Total amount paid over the term of the Debt Securities: $100.00

The equivalent annually compounded rate of return in this example is 0.00%.

Example #3 — Gain Scenario with Autocall Redemption Event



- Indicates Observation Date on which there is an Autocall Redemption Event; therefore an Interest Payment will occur on the related Interest Payment Date.
- Indicates Observation Dates on which the Autocall Redemption Price is breached; therefore there is no Autocall Redemption Event and no Interest Payment will occur on the related Interest Payment Date.

— iShares NASDAQ 100 Index ETF (CAD-Hedged)

In this scenario, the Closing Price is greater than or equal to the Autocall Redemption Price on the Observation Date that falls 36 months into the term of the Debt Securities. This would constitute an Autocall Redemption Event and an Interest Payment would be payable on the third Interest Payment Date.

(i) Interest Payment

In this example, the Initial Closing Price (X_i) is $84.70 and the Final Closing Price (X_f) is $118.58; therefore, there is an Autocall Redemption Event on the third Observation Date. On the first and second Observation Dates, no Autocall Redemption Event would occur because the Closing Price at each such Observation Date is below the Autocall Redemption Price. Therefore, the Interest Payment payable on the Autocall Redemption Date would be calculated as follows:

The Underlying Securities Return is calculated as follows:

$$((X_f / X_i) - 1) \times \$100$$

$$((\$118.58 / \$84.70) - 1) \times \$100 = \$40.00$$

Since the Underlying Securities Return is greater than $30.75, the Interest Payment is:

$$\$30.75 + [5.00\% \times (\text{Underlying Securities Return} - \$30.75)]$$

$$\$30.75 + [5.00\% \times (\$40.00 - \$30.75)] = \$31.21$$

(ii) Autocall Redemption Amount

The Autocall Redemption Amount per Debt Security is equal to $100.00.

Therefore, the total amounts payable per Debt Security from the Issue Date to the Autocall Redemption Date are:

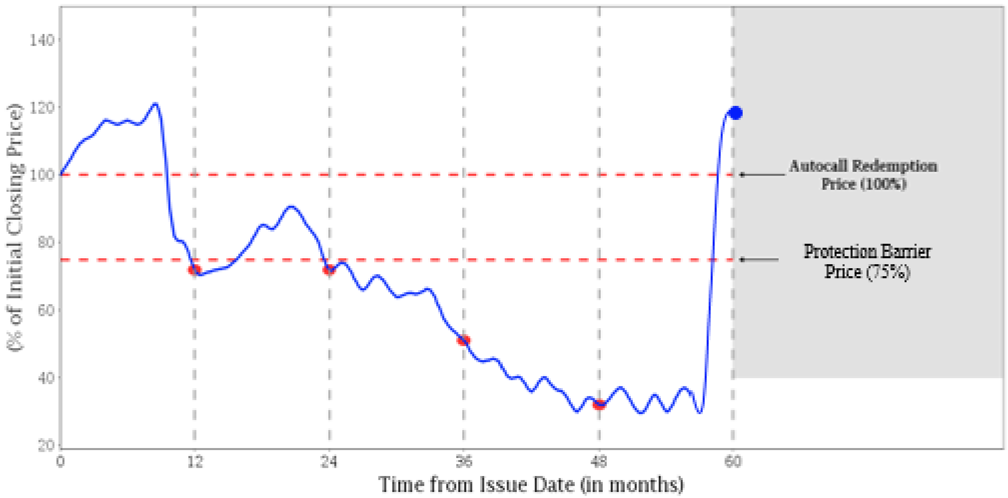
(a) Interest Payment: $31.21

(b) Autocall Redemption Amount: $100.00

(c) Total amount paid over the term of the Debt Securities: $131.21

The equivalent annually compounded rate of return in this example is 9.48%.

Example #4 — Gain Scenario with Autocall Redemption Event



- Indicates Observation Date on which there is an Autocall Redemption Event; therefore an Interest Payment will occur on the related Interest Payment Date.
- Indicates Observation Dates on which the Autocall Redemption Price is breached; therefore there is no Autocall Redemption Event and no Interest Payment will occur on the related Interest Payment Date.
- iShares NASDAQ 100 Index ETF (CAD-Hedged)

In this scenario, the Closing Price is greater than or equal to the Autocall Redemption Price on the final Observation Date. This would constitute an Autocall Redemption Event and an Interest Payment would be payable on the Maturity Date (being the final Interest Payment Date).

(i) Interest Payment

In this example, the Initial Closing Price (X_i) is \$84.70 and the Final Closing Price (X_f) is \$101.64; therefore, there is an Autocall Redemption Event on the Final Valuation Date (being the final Observation Date). On the first, second, third and fourth Observation Dates, no Autocall Redemption Event would occur because the Closing Price at each such Observation Date is below the Autocall Redemption Price. Therefore, the Interest Payment payable on the Maturity Date (being the final Interest Payment Date) would be calculated as follows:

The Underlying Securities Return is calculated as follows:

$$((X_f / X_i) - 1) \times \$100$$

$$((\$101.64 / \$84.70) - 1) \times \$100 = \$20.00$$

Since the Underlying Securities Return is less than \$51.25, the Interest Payment is \$51.25.

(ii) Autocall Redemption Amount

The Autocall Redemption Amount per Debt Security is equal to \$100.00.

Therefore, the total amounts payable per Debt Security from the Issue Date to the Autocall Redemption Date are:

(a) Interest Payment: \$51.25

(b) Autocall Redemption Amount: \$100.00

(c) Total amount paid over the term of the Debt Securities: \$151.25

The equivalent annually compounded rate of return in this example is 8.63%.

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 Debt 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 Debt 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 Debt Securities and that the Debt 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 Debt Securities having regard to their particular circumstances.

Holders 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 Debt Securities as capital property (a "**Resident Holder**"). Certain Resident Holders who might not otherwise be considered to hold their Debt Securities as capital property may, in certain circumstances, have their Debt Securities, and all other "Canadian securities" (as defined in the Tax Act) owned by such Resident Holders in the taxation year and each subsequent taxation year, treated as capital property as a result of having made the irrevocable election permitted by subsection 39(4) of the Tax Act.

Holding Debt Securities

The amount of any Interest Payment 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.

In certain circumstances, provisions of the Tax Act require a holder of a "prescribed debt obligation" (as defined for the purposes of the Tax Act) to include in income for each taxation year the amount of any interest, bonus or premium receivable on the obligation over its term based on the maximum amount of interest, bonus or premium receivable on the obligation. While the Debt Securities will generally be considered to be prescribed debt obligations to a Resident Holder, based on counsel's understanding of the CRA's current administrative practice, there should be no deemed accrual of interest on a prescribed debt obligation until such time as the return thereon becomes determinable. Counsel has been advised that the Bank anticipates that throughout each taxation year ending before an Autocall Redemption Date including the Maturity Date, the return on the Debt Securities generally will not be determinable. Where this is the case, on the basis of such understanding of the CRA's administrative practice there should be no deemed accrual of interest on the Debt Securities for taxation years (being calendar years) of a Resident Holder ending prior to an Autocall Redemption Date including the Maturity Date (or, if applicable, the date of their earlier repayment in full), except as described below under "Disposition of Debt Securities" where a Debt Security is transferred before any such date.

Disposition of Debt Securities

Where a Resident Holder disposes of a Debt Security (other than to the Bank on an Autocall Redemption Date including the Maturity Date, or earlier redemption or repayment in full), the Tax Act requires the amount of interest, if any, accrued on the Debt Security that is unpaid at that time to be included in computing the income of the Resident Holder for the taxation year in which the disposition occurs (except to the extent such amount has otherwise been included in computing the income of the Resident Holder for that year or a preceding year), and excludes such amount from the proceeds of disposition. On an assignment or other transfer of a Debt Security by a Resident Holder (other than to the Bank on an Autocall Redemption Date including the Maturity Date, or an earlier redemption or repayment in full), a formula amount will be deemed to have accrued on the Debt Security up to the time of the transfer, so that such amount will be required to be included in the income of the

Resident Holder for the taxation year of the Resident Holder in which the transfer occurs. Such formula amount equals the excess, if any, of the price for which it is so transferred over its outstanding principal amount at the time of the transfer.

The Resident Holder should realize a capital loss to the extent that the proceeds of disposition, net of amounts included in income as interest (including any formula amount as described above) and any reasonable costs of disposition are less than the Resident Holder's adjusted cost base of the Debt Securities (which generally should be equal to the cost of the Debt Securities to the Resident Holder). As described above, any gain realized from the disposition of Debt Securities will be included in income and will not give rise to a capital gain. Resident Holders who dispose of Debt Securities prior to an Autocall Redemption Date including the Maturity Date (or earlier redemption or repayment in full by the Bank) should consult their own tax advisors with respect to their particular circumstances.

Payment at Maturity or Early Repayment

A Resident Holder who holds the Debt Securities until maturity (or earlier repayment in full by the Bank) and who receives repayment proceeds that are less than the Principal Amount of the Debt 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 Debt Securities. The income tax considerations associated with the realization of a capital loss are described below.

Treatment of Losses

One-half of any capital loss realized by a Resident Holder will constitute an allowable capital loss that is deductible against taxable capital gains of the Resident Holder, subject to and in accordance with the provisions of the Tax Act.

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 Debt Securities is not a "specified shareholder" of the Bank or 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 Debt 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 Debt Securities (including any amount paid at maturity in excess of the principal amount and interest deemed to be paid in certain cases involving the assignment or other transfer of a Debt Security to a resident or deemed resident of Canada, likely including any formula amount referred to above) 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 Debt Securities, interest paid or credited or deemed to be paid or credited on the Debt 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 Debt Security.

Eligibility for Investment

The Debt 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 ("**TFSAs**"), 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 Debt 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. Debt 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.