

Prospectus Supplement dated March 28, 2022 to the Short form Base Shelf Prospectus dated March 25, 2022 and the Prospectus Supplement thereto dated March 28, 2022

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

This prospectus supplement together with the short form base shelf prospectus dated March 25, 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. See "Plan of Distribution" in the program supplement.

New Issue

March 28, 2022



**Royal Bank of Canada
Senior Note Program**

Index Linked Securities

We may offer and sell securities constituting unsubordinated indebtedness ("**Securities**", as defined in the prospectus supplement establishing our senior note program (the "**Senior Note Program**") dated March 28, 2022 (the "**program supplement**"), for the purpose of this product supplement (defined below) and the program supplement and, for greater clarity, not for the purpose of our short form base shelf prospectus dated March 25, 2022 (the "**base shelf prospectus**")) from time to time of any maturity, which Securities will be linked to the performance of one or more indices as specified in a pricing supplement (a "**pricing supplement**") to be delivered together with our base shelf prospectus, the program supplement and this prospectus supplement which generally describes index linked Securities (the "**product supplement**"). The specific terms of the Securities, which will be established at the time of the offering and sale of the Securities, will be set out in the pricing supplement delivered together with the base shelf prospectus, the program supplement and this product supplement. We describe certain common terms and conditions of the Securities in this product supplement, although your pricing supplement may identify terms and conditions that are unique to the Securities offered under that pricing supplement whether or not they are described in this 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*.

The return on your Securities will be based on the performance of one or more indices during the term of your Securities. The Securities are designed for investors seeking exposure to the specified index or indices, and who are prepared to assume the risks associated with an investment linked to, the specified index or indices.

An investment in the Securities involves risks. If you purchase Securities, you will be exposed to fluctuations in interest rates and changes in the levels of the applicable index or indices. Index levels may be volatile and an investment linked to index levels may be considered to be speculative. Securities offered hereunder do not guarantee the repayment of the entire amount of the principal of such Securities or the payment of any return, may be subject to a cap or other limitation on return and may be fully exposed to any decline in the value of the securities or other interests that comprise the specified index or indices. **You could lose substantially all of your investment. See "Risk Factors" in the base shelf prospectus, the program supplement, this product supplement and the relevant pricing supplement.**

Table of Contents

<u>Product Supplement</u>	<u>Page</u>		<u>Page</u>
Prospectus for Securities.....	PS-3	Return of Capital Securities.....	PS-6
Documents Incorporated by Reference.....	PS-3	Extraordinary Events.....	PS-6
Caution Regarding Forward-Looking Statements.....	PS-3	Discontinuation of an Index.....	PS-9
Description of the Index Linked Securities.....	PS-4	Historical Index Level Information.....	PS-9
Indices.....	PS-4	Hypothetical Returns on Your Securities.....	PS-10
Principal at Risk Securities.....	PS-5	Dealings in Underlying Securities.....	PS-10
Maturity Date and Amount Payable.....	PS-5	Canadian Tax Considerations.....	PS-10
Available Information Regarding Securities and		Risk Factors.....	PS-10
Index Levels.....	PS-6		
 <u>Program Supplement</u>	 <u>Page</u>		 <u>Page</u>
Prospectus for Securities.....	S-3	European Union and United Kingdom Packaged Retail and	
Documents Incorporated by Reference.....	S-3	Insurance-based Investment Products Notice.....	S-10
Caution Regarding Forward-Looking Statements.....	S-3	Special Circumstances.....	S-11
Use of Proceeds.....	S-3	Calculation Agent.....	S-11
Description of the Securities.....	S-4	Independent Calculation Experts.....	S-12
General.....	S-4	Notification to Holders.....	S-12
Fiscal Agency, Calculation Agency and Fundserv Depository		Withholding Taxes.....	S-12
Agreement.....	S-4	Manner of Payment and Delivery.....	S-12
Global Securities.....	S-4	Summary of Fees and Expenses.....	S-13
Legal Ownership.....	S-5	Transfer of Obligations to Branch.....	S-13
Types of Securities.....	S-6	Modification and Waiver.....	S-13
Information in the Product Supplements and Pricing		Events of Default.....	S-13
Supplements.....	S-7	Securityholder Meetings.....	S-14
Currency Denomination.....	S-8	Governing Law.....	S-14
Original Issue Discount Securities.....	S-8	Plan of Distribution.....	S-14
Maturity Date.....	S-9	Secondary Market For Securities.....	S-15
Interest.....	S-9	Listing.....	S-15
Ratings.....	S-9	Dealers May Purchase.....	S-15
Redemption at the Option of the Bank; No Sinking Fund.....	S-9	Fundserv.....	S-15
Repayment at the Option of the Holder.....	S-10	Risk Factors.....	S-16
Purchase of Securities by the Bank.....	S-10	Material Contracts.....	S-18
		Legal Matters.....	S-18
		Certificate of the Dealers.....	S-19
 <u>Base Shelf Prospectus</u>	 <u>Page</u>		 <u>Page</u>
Caution Regarding Forward-Looking Statements.....	3	Bank Act Restrictions.....	9
Royal Bank of Canada.....	4	Earnings Coverage.....	9
Documents Incorporated by Reference.....	4	Plan of Distribution.....	10
Share Capital.....	5	Risk Factors.....	10
Changes in the Bank's Consolidated Capitalization.....	5	Use of Proceeds.....	11
Description of Common Shares of the Bank.....	5	Legal Matters.....	11
Description of the Securities that May be Offered under this		Well-Known Seasoned Issuer.....	12
Prospectus.....	6	Statutory Rights of Withdrawal and Rescission.....	12
Book-Entry-Only Securities.....	8	Certificate of the Bank.....	C-1

Prospectus for Securities

Securities that may be issued under our Senior Note Program are unsecured, unsubordinated debt securities. The Securities will be described in four separate documents: (1) the base shelf prospectus, (2) the program supplement, (3) a product supplement (which is what this document is), and (4) a pricing supplement that contains the specific terms (including pricing information) about the Securities offered. In respect of any particular Securities we may offer under our Senior Note Program, the base shelf prospectus and the program supplement together with the applicable product supplement and pricing supplement will collectively constitute the “**prospectus**” in respect of such Securities. See “Prospectus for Securities” in the program supplement.

Documents Incorporated by Reference

This product 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.

Any statement contained in a document incorporated or deemed to be incorporated by reference in the base shelf prospectus, the program supplement or this product supplement is deemed to be modified or superseded, for purposes of this product supplement, to the extent that a statement contained herein or in any other subsequently filed document which also is or is deemed to be incorporated by reference in the base shelf prospectus, the program supplement or this product supplement modifies or supersedes such statement. The modifying or superseding statement need not state that it has modified or superseded a prior statement or include any other information set forth in the document that it modifies or supersedes. The making of a modifying or superseding statement will not be deemed an admission for any purposes that the modified or superseded statement, when made, constituted a misrepresentation, an untrue statement of material fact or an omission to state a material fact that was required to be stated or that was necessary to make a statement not misleading in light of the circumstances in which it was made. Any statement so modified or superseded will not be deemed, except as so modified or superseded, to constitute a part of this product supplement.

Caution Regarding Forward-Looking Statements

See “Caution Regarding Forward-Looking Statements” in the applicable pricing supplement for any Securities offered.

Description of the Index Linked Securities

The following terms and conditions, subject to completion and amendment and as supplemented or varied as specified in the applicable pricing supplement, will be applicable to index linked Securities. The applicable pricing supplement in relation to any particular Securities offering may specify other terms and conditions which will, to the extent so specified or to the extent inconsistent with the following conditions, replace or modify the following conditions for the purposes of such Securities.

Indices

Indices and Index Sponsors

Securities issued hereunder will be linked to:

- a particular index;
- a basket of two or more indices; or
- the performance of an index (or a basket of indices) that achieves a particular ordinal rank among a group of two or more indices (or a basket or baskets thereof), such as the worst performing index (or basket of indices).

The index or indices to which the return on the Securities is linked will be specified in the relevant pricing supplement. In any case where the return on Securities is linked to a basket of indices, the relevant pricing supplement will indicate the relative weighting of each index in the basket and any other compositional or weighting factors relevant to such basket. In this product supplement, references to “**Indices**” mean the index or indices to which particular Securities are linked and references to an “**Index**” mean one of the indices to which particular Securities are linked. We refer to the securities or other interests that comprise an Index as the “**Underlying Securities**”.

When we refer to an “**Index Sponsor**” or “**Index Sponsors**”, we mean the sponsor or sponsors of the Indices to which your Securities are linked as specified in the applicable pricing supplement.

Unless otherwise specified in a pricing supplement in respect of particular Securities to be offered, we are not, and are not related to, any Index Sponsor. Unless otherwise specified in a pricing supplement in respect of particular Securities to be offered, where we are not, and are not related to, an Index Sponsor:

- the Securities have not been passed on by such Index Sponsor as to their legality or suitability for investment;
- the Securities are not issued, endorsed, sponsored or promoted by and are not financial or legal obligations of such Index Sponsor;
- the trade names, service marks, trademarks or registered trademarks of such Index Sponsor are the property of their owner;
- the Index Sponsor makes no warranties and bears no liabilities with respect to the Securities or to the administration or operation of the Securities;
- we make no representation or warranty as to the accuracy or completeness of information regarding the Index or the Index Sponsor;

- neither we nor any agent, underwriter or other dealer appointed in respect of any offering of Securities has participated in the preparation of publicly available information or made any due diligence inquiry with respect to the Index or the Index Sponsor; and
- we cannot give any assurance that all events occurring prior to the date of the relevant pricing supplement (including events that would affect the accuracy or completeness of the publicly available documents described herein) that would affect the levels of the Index or the value of the Underlying Securities (and therefore the level of the Index at the time we price the Securities) have been publicly disclosed. Subsequent disclosure of any such events or the disclosure of or failure to disclose material events concerning the Index, an Index Sponsor or Underlying Securities could affect the amount payable on your Securities and therefore the market value of the Securities in the secondary market, if any.

Information regarding Indices and Index Sponsors may be obtained from various public sources including, but not limited to, the Index Sponsors' websites and other information publicly disseminated by Index Sponsors. Unless otherwise specified in a pricing supplement in respect of particular Securities to be offered, where we are not, and are not related to, an Index Sponsor, any and all information regarding such Index Sponsor and the Indices it sponsors included in any pricing supplement will be derived from such publicly available information.

Principal at Risk Securities

The principal amount of your Securities may not be entirely protected. The relevant pricing supplement for your Securities will specify the portion of the principal of your Securities that is "protected" (i.e. the minimum amount or percentage that we are obligated to pay on the Securities in any circumstance), which amount may be as little as 1% of the principal. In addition, some Securities may provide for the repayment of some or most of the principal over the term of the Securities (see "– Return of Capital Securities" below).

Maturity Date and Amount Payable

The maturity date for your Securities will be the maturity date specified in the relevant pricing supplement. Unless we repay your Securities earlier due to an Extraordinary Event (see "– Extraordinary Events" below) or, if we have an early redemption or call right (as specified in the applicable pricing supplement) which we elect to exercise, we will repay your Securities on their maturity date according to the formula specified in the applicable pricing supplement (and to the extent the principal has not already been repaid in installments during the term of the Securities).

The return on your Securities will be based on the performance of the Indices to which the Securities are linked determined as specified in the applicable pricing supplement. The performance of each Index will be measured from the level of the Index at one point in time to the level of the Index at one or more subsequent points in time, in each case determined as specified in the applicable pricing supplement. Measurement of Index levels may occur at one or more intervals over the term of the Securities. The percentage change in an Index level over the measurement period, and in turn, the return on your Securities, may be positive or negative.

The return on your Securities will be determined in the manner described in the applicable pricing supplement and is referred to herein as the "**Variable Return**". The Variable Return on your Securities may be negative and may be paid at maturity or at various times over the term of the Securities, all as specified in the applicable pricing supplement. The aggregate amount payable on your Securities at maturity is called the "**Redemption Amount**". The specific formula for determining the return on your Securities will be set out in the pricing supplement for your Securities. The return on your Securities will generally depend on the percentage change in Index levels over the term of the Securities and may be:

- enhanced by a participation rate which may amplify, maintain or reduce the return on your Securities;
- subject to an upper limit or cap;
- subject to a lower limit or floor;

- reduced by an amount attributed to withholding taxes payable on dividends or other distributions on the Underlying Securities; or
- subject to such other variables or methods of calculation as described in the applicable pricing supplement.

Changes in Index levels during the term of your Securities may not be reflected in the calculation of the return on the Securities. The Calculation Agent will calculate the return by comparing only the Index level at one point in time relative to the Index level at another point, all as specified in the applicable pricing supplement. No other Index levels or values will be taken into account. As a result, the return on your Securities may be negative and you may lose some or substantially all of your principal even if the change in an Index level is positive at certain times during the term of the Securities, before falling to a level that is negative in the period it is determined for purposes of calculating return. In addition, if the return on your Securities is based on the performance of more than one Index, the level of one or more Indices could increase over the term of the Securities, but be offset or negated by decreases in the levels of the other Indices.

Any payment due and payable on your Securities on a date that is not a Business Day will be postponed until the immediately following Business Day.

Available Information Regarding Securities and Index Levels

You may obtain current information regarding your Securities at www.rbcnotes.com. Such information includes the key terms of your Securities (i.e. maturity date, term, amount of your Securities that is principal protected, underlying indices, and availability of secondary markets), the current performance of your Securities (i.e. initial price, current price and return since inception), the performance of the underlying indices and any applicable early trading charges. The price of the Securities posted at www.rbcnotes.com will be calculated as if the date on which the information is provided is the maturity date of the specified Securities and does not reflect the resale price of such Securities prior to their maturity date. See “Secondary Market for Securities” in the program supplement. A copy of the prospectus for your Securities (see “Prospectus for Securities” in this product supplement) will be posted at www.rbcnotes.com.

Return of Capital Securities

If specified in the relevant pricing supplement, some or all of the principal of your Securities may be repaid to you in instalments over the term of the Securities, such Securities referred to as return of capital Securities or “**RoC Securities**”. Instalment payments of principal made over the term of RoC Securities reduce the outstanding principal payable at maturity.

Extraordinary Events

Delay in Determining Index Level

Subject to our right to accelerate payment on Securities in the circumstances described below under “– Acceleration upon Occurrence of Extraordinary Event”, if an Extraordinary Event occurs and is continuing on a day on which an Index level is to be determined, then the day on which such Index level will be determined will instead be the earlier of (1) the next Exchange Day for the applicable Index on which there is no such Extraordinary Event, and (2) the fifth day that would otherwise have been an Exchange Day for such Index following the day on which the Index level was supposed to have been determined, as specified in the applicable pricing supplement, but for the occurrence of the Extraordinary Event. In the latter case, if the Extraordinary Event is continuing on such fifth day, then the Calculation Agent will make such calculations as it may deem appropriate to determine the Index level of such Index on such day using, to the extent possible, the closing level for such Index on the last day it was determinable. In such case, any payment due to be made on the Securities to be wholly or partially determined from such postponed Index level determination will be postponed to the first Business Day after the Index level of all of the Indices to which the affected Securities are linked has been determined.

Acceleration upon Occurrence of Extraordinary Event

If an Extraordinary Event occurs and continues for at least five consecutive Exchange Days, then we may, by notice to holders of the affected Securities (an “**Acceleration Notice**”) accelerate the calculation of the return payable in respect of all Securities of a series to the date of the Acceleration Notice (the “**Accelerated Valuation Date**”) and accelerate payment of such return to the Business Day that is ten Business Days after the Accelerated Valuation Date (the “**Special Payment Date**”) to holders of record on the Special Payment Date. Unless otherwise specified in the relevant pricing supplement, instead of paying the Redemption Amount at maturity of the Securities, we will pay the greater of (1) an amount equal to the portion of the principal of your Securities that is protected (as specified in the relevant pricing supplement) and (2) the Actualized Fair Value (as defined below) of the Securities (such payment, the “**Accelerated Payment**”) to holders of record on the Special Payment Date. Unless otherwise specified in the relevant pricing supplement, payment of the Accelerated Payment on the Special Payment Date will constitute payment in full on your Securities and no other payments will be made or due in respect of your Securities at any time after such date.

Definitions

The following terms have the meanings set out below:

- “**Actualized Fair Value**” per Security is the fair value of a Security as at the Accelerated Valuation Date as determined by the Calculation Agent acting in good faith in accordance with industry-accepted valuation methods, practices and procedures for valuing financial instruments of the nature of the Securities. In this regard, the Calculation Agent will have regard to a wide variety of interrelated factors, such as the level of principal protection (if any), the level of the applicable Indices as at the Accelerated Valuation Date relative to the level of the applicable Indices as at the initial valuation date for the applicable Indices (as specified in the applicable pricing supplement), the prevailing level of interest rates, the volatility of the Underlying Securities of the Indices to which the Securities are linked, the existence of any right to redeem the Securities and the time remaining until such redemption right may be exercised by us and the time remaining until the maturity of the Securities. The calculation of the Actualized Fair Value is expected to involve a market valuation of the various components of the formula for determining the amount payable in respect of the Securities.
- “**Exchange**” means a securities exchange or trading platform on which Underlying Securities trade, or on which futures contracts, options or other derivatives relating to the Underlying Securities or one or more Indices trade.
- “**Exchange Day**” means a day on which an Exchange is (or, but for the occurrence of an Extraordinary Event, would have been) open for trading during its regular trading session, including a day on which trading on such Exchange is scheduled to close prior to its regular closing time.
- “**Extraordinary Event**” means, with respect to any Securities, any event, circumstance or cause that we determine, and the Calculation Agent confirms, has or will have a material adverse effect on our ability to perform our obligations under such Securities or to hedge our position in respect of our obligation to make payment of amounts owing thereunder, including as a result of any of the Bank’s internal policies, and more specifically includes the following events to the extent that they have such effect:
 - (i) the occurrence or existence on any Exchange Day of a Market Disruption Event in respect of one or more Indices;
 - (ii) the enactment, publication, decree or other promulgation of, or any change in, any statute, regulation, rule, policy, practice, or order, or the promulgation or any change in the interpretation by any court, tribunal or other government authority of any statute, regulation, rule, policy, practice, or order that would make it unlawful or impracticable for us to perform

our obligations under the Securities or for dealers to execute, maintain or modify a hedge in a position in respect of one or more Indices or the Underlying Securities;

- (iii) the taking of any action by any governmental, administrative, legislative or judicial authority or power of Canada or any other country or political subdivision thereof that has a material adverse effect on the financial markets of Canada or a country in which an Exchange is located;
 - (iv) any outbreak or escalation of hostilities or other national or international calamity or crisis (including, without limitation, natural calamities) which has or would have a material adverse effect on our ability to perform our obligations under the Securities or of a dealer to execute, maintain or modify a hedge of a position with respect to one or more Indices or the Underlying Securities or a material and adverse effect on the economy of Canada or any country in which an Exchange is located or on the trading of securities generally on any Exchange; or
 - (v) a Hedging Event.
- **“Hedging Event”** means, with respect to any Securities, the occurrence of an event that has a material adverse effect on the Bank’s ability to place, maintain or modify any hedge, including without limitation:
 - (i) the adoption of or any change in any applicable law or regulation (including tax law), or the promulgation or any change in the interpretation by any court, tribunal or regulatory authority of any applicable law or regulation (including by a taxing authority);
 - (ii) the termination or material amendment of any hedging contract with a third party;
 - (iii) the inability of the Bank after using commercially reasonable efforts, to acquire, establish, re-establish, substitute, maintain, unwind or dispose of any transaction or asset for hedging its price risk, or realize, recover or remit the proceeds of any such transaction or asset, including as a result of the application of the Bank’s internal policies; or
 - (iv) a material increase in the amount of tax, duty, expense or fee to acquire, establish, re-establish, substitute, maintain, unwind or dispose of any transaction or asset for hedging its price risk or realize, recover or remit the proceeds of any such transaction or asset.

The Bank will publish information regarding any adjustments required upon the occurrence of a Hedging Event at www.rbcnotes.com.

- **“Market Disruption Event”** means, in respect of an Index, the occurrence of any of the following events:
 - (i) the failure of the Index Sponsor to announce or publish the closing level, or the information necessary for determining the closing level, of the Index, or the temporary or permanent discontinuance or unavailability of the Index, in circumstances where the Index Sponsor or another entity does not replace the Index as contemplated under “– Discontinuation of an Index” below;
 - (ii) a suspension, absence or material limitation of trading on an Exchange for the Underlying Securities of such Index, or futures contracts, options or other derivatives relating to the Index or the Underlying Securities of such Index, including a limitation on trading on any such Exchange on any one day by reason of movements in prices that exceed the price permitted by such Exchange;

- (iii) the cessation of the Index and no successor Index is selected by the Calculation Agent within five Exchange Days of the cessation of such Index;
- (iv) the occurrence of a material change in the formula for or method of determining the level of the Index; or
- (v) the occurrence of a material change in the content, composition or constitution of the Index.

For the purpose of determining whether a Market Disruption Event exists at any time, a limitation on the hours or number of days of trading will not constitute a Market Disruption Event if it results from an announced change in the regular business hours of an Exchange and an “absence” or “limitation on trading” of or on such Exchange will not include any time when such Exchange itself is closed for trading under ordinary circumstances.

Independent Calculation Experts

If, in connection with an Extraordinary Event, a determination contemplated to be made by the Calculation Agent in respect of any Securities involves the application of material discretion as determined by the Calculation Agent, acting reasonably, and is not based on information or calculation methodologies compiled, utilized or provided by, or derived from, independent third party sources (including hedge counterparties), we will appoint at our cost an Independent Calculation Expert to confirm such determination. See “Independent Calculation Experts” in the program supplement.

Discontinuation of an Index

If an Index level which is required for determination of any amount payable on a Security is not announced or published by the Index Sponsor of such Index for at least two consecutive Exchange Days, but is calculated and publicly announced by another independent authoritative third party appointed as a result of such disruption in the announcement or publication of such Index level, which third party is acceptable to the Calculation Agent, then the applicable Index level will be determined by reference to the level of such Index as so calculated and announced by such third party.

If at any time an Index Sponsor or the third party ceases to announce or publish the applicable Index level, either temporarily or permanently, or if at any time we are unable to hedge our position in respect of our obligation to make payment of amounts owing under Securities linked to such Index (the “**discontinued Index**”), including as a result of the general unavailability of information or the discontinuance or suspension of trading on any relevant Exchange for futures contracts, forward contracts or options contracts related to the affected Index, then the Calculation Agent may designate another Index (a “**successor Index**”) to replace such Index, provided that the successor Index substantially and transparently tracks the market performance of the broad local market or markets in respect of the Underlying Securities included in the discontinued Index, and subject to appropriate adjustments being made to the terms and provisions of the Securities which the Calculation Agent determine to be necessary or appropriate to preserve the economic value of the Securities as of the effective date of replacement.

Historical Index Level Information

We may provide historical information relating to the levels of the Indices to which your Securities are linked in the pricing supplement for your Securities. You should not take any such historical Index levels as an indication of future performance. We cannot give you any assurance that the level of any Index will not decrease. You may receive little or no return on your Securities and the amount payable on your Securities may be less than the principal amount of your Securities.

Hypothetical Returns on Your Securities

The pricing supplement for your Securities may include a table, chart, calculation example or other explanation showing a hypothetical return for your Securities at maturity or earlier redemption (if applicable), based on a range of hypothetical Index levels and on various key assumptions shown in the pricing supplement. Any such information will be provided for purposes of illustration only. It should not be viewed as an indication or prediction of future investment results. Rather, it is intended merely to illustrate the impact of various hypothetical market levels of Indices on any valuation date as calculated in the manner described in the relevant pricing supplement and assuming all other variables remained constant.

As shown in the pricing supplement for your Securities, the hypothetical amounts payable on your Securities may bear little or no relationship to the actual market value of your Securities on that date or at any other time, including any time you may wish to sell your Securities or at maturity. In addition, you should not view the hypothetical amounts as an indication of the possible financial return on an investment in your Securities, since the financial return will be affected by various factors, including taxes and withholdings (if applicable), that the hypothetical information does not take into account. Moreover, whatever the financial return on your Securities might be, it may bear little relation to, and may be much less than, the financial return that you might realize were you to invest in the Underlying Securities comprising the Index directly.

We describe various risk factors that may affect the market value of your Securities, and the unpredictable nature of that market value, under “Risk Factors” in the base shelf prospectus, the program supplement, this product supplement and the relevant pricing supplement.

Dealings in Underlying Securities

We and our affiliates may from time to time, in the course of our respective normal business operations, have dealings in the Underlying Securities which make up an Index or with issuers of such Underlying Securities and certain of their affiliates, including through the extension of credit to, or by investing in, such entities. We and our affiliates will act in the normal course of business in these circumstances and will not take into account the effect, if any, of such actions on Index levels or any amounts that may be payable on the Securities or your interests generally.

Canadian Tax Considerations

The principal Canadian federal income tax consequences generally applicable to an initial purchaser of Securities will be described in the relevant pricing supplement for such Securities.

Risk Factors

An investment in Securities is subject to the risks described below, as well as the risks described under “Risk Factors” in the base shelf prospectus, the program supplement and the relevant pricing supplement. Your Securities are not secured debt and are riskier than ordinary unsecured debt securities. Also, investing in the Securities is not equivalent to investing directly in the Underlying Securities comprising the Indices to which the Securities are linked. You should carefully consider whether the Securities are suited to your particular circumstances.

This section describes certain risks relating to an investment in the Securities. We urge you to read the following information about these risks, together with the other information in the base shelf prospectus, the program supplement, this product supplement and the applicable pricing supplement, before investing in the Securities.

Your Investment in the Securities May Result in a Loss

The Securities do not guarantee the return of the entire amount of the principal of the Securities and, unless otherwise specified in the pricing supplement for your Securities, we will not repay you a fixed amount of principal on the Securities on their maturity date. The return on your Securities may be positive or negative and will generally depend on the direction of and percentage change in the levels of the Indices over the applicable measurement period. As specified in the applicable pricing supplement, the amount payable on your Securities may be less than the principal amount per Security even if the Index level rises at certain periods during the term of the Securities. In addition, the level of one or more Indices could increase over the term of the Securities, but be offset or negated by decreases in the levels of the other Indices on which the return on the Securities is based. As a result, you may receive less, and possibly significantly less, than the principal amount of your Securities.

Your Return May Be Lower than the Return on Other Debt Securities of Comparable Maturity

The return on your Securities, which could be negative, may be less than the return you could earn on other investments, including traditional interest-bearing debt securities of the Bank with the same term to maturity as the Securities. Unlike traditional interest-bearing debt securities, subject to the portion of the principal of your Securities that is protected and as may be otherwise specified in the relevant pricing supplement, the Securities do not guarantee the return of their full principal amount on their maturity date.

Principal Protection on the Securities Depends on the Creditworthiness of the Bank and Does Not Apply to Sales in the Secondary Market

In respect of any portion of the principal of your Securities that is protected, such principal protection applies only where the Securities are held to maturity and not if you choose to sell the Securities in any secondary market prior to maturity. Your ability to receive principal protection on the Securities depends on the creditworthiness of the Bank. See “Ratings” and “Secondary Market for Securities” in the program supplement.

There May Not Be an Active Trading Market for the Securities

There may be little or no secondary market for the Securities. Unless otherwise specified in the relevant pricing supplement, your Securities will not be listed or quoted on any securities exchange or any electronic communications network. RBC DS and other affiliates of the Bank may make a market for the Securities, although they are not required to do so, and they may stop any such market-making activities at any time.

Even if a secondary market for the Securities develops, it may not provide significant liquidity or trade at prices advantageous to you. We expect that transaction costs in any secondary market would be high. As a result, the difference between bid and ask prices for your Securities in any secondary market could be substantial. If you are able to sell your Securities during their term, you may have to do so at a substantial discount from the issue price and as a result, you may suffer substantial losses.

The Equity Markets Are Volatile

Equity securities, including Underlying Securities, are susceptible to general market fluctuations and increases and decreases in value based on many unpredictable factors including, but not limited to, market confidence, the perception of equity markets generally and the perceptions of a specific issuer or issuers of securities. Such perceptions themselves are based on unpredictable factors including past performance, expectations with regard to domestic, economic, monetary and regulatory policies, inflation and interest rates, economic expansion or contraction and the domestic and international political, economic, financial and social policies.

Equity Securities Issued by Foreign Issuers May Be Subject to Additional Risks

Underlying Securities that are foreign securities and foreign securities markets, may be more volatile than Canadian securities and securities markets. Direct or indirect government intervention to stabilize foreign markets, as well as cross shareholding in foreign issuers, may affect trading prices and volumes in those markets. There may be less publicly available information about foreign issuers than there is about Canadian issuers subject to the reporting requirements of the Canadian securities regulators, and foreign issuers are subject to accounting, auditing and financial reporting standards and requirements that may be different from those applicable to Canadian reporting issuers. Where the foreign issuer reports, or its securities trade, in a currency other than the Canadian dollar, there may be currency risk, and performance of the Securities and/or the Indices and/or the Underlying Securities may be affected by currency fluctuations and volatility.

Securities Linked to One Index or a Limited Number of Indices Only May Be Subject to Concentration Risk

Securities that are linked to one Index or a limited number of Indices only are less diversified and may be subject to greater concentration risk and volatility than other securities linked to a larger range of underlying assets.

The Market Value of Securities May Be Influenced by Many Unpredictable Factors and Sales in the Secondary Market May Result in Significant Losses

Even if a secondary market for the Securities develops, it may not provide significant liquidity or trade at prices advantageous to you. Many factors independent of our creditworthiness may affect the trading market and market value of your Securities. These factors include, but are not limited to:

- the trading price of Underlying Securities and the degree to which the performance of each Underlying Security correlates to one another;
- the volatility of the Indices to which the Securities are linked;
- the dividend or other distribution rate, if any, on the Underlying Securities (while not paid to holders of the Securities directly, dividend or other distribution payments on the Underlying Securities may influence the market level of Indices or options on Indices and, if specified in the relevant pricing supplement, correspond to certain payments made on your Securities);
- economic, financial, regulatory, political, military, judicial and other events that affect stock markets generally and which may affect Index levels;
- the time remaining to the maturity of the Securities;
- any early redemption features of the Securities;
- the level, direction and volatility of interest rates and currency exchange rates;
- any entitlement of holders of the Securities to receive repayments of principal or payments of interest during the term of the Securities;
- disruptions of market trading in Underlying Securities and related futures markets; and
- the quantity and liquidity of the Underlying Securities.

These factors interrelate in complex ways, and the effect of one factor on the market value of the Securities may offset or enhance the effect of another factor.

Securities that are designed for specific investment objectives or strategies may have a more limited trading market and may experience more price volatility. There may be a limited number of buyers for such Securities and this may affect the price you receive for these Securities in the secondary market or your ability to sell these Securities at all.

We expect that transaction costs in any secondary market will be high. The difference between bid and ask prices for your Securities in any secondary market could be substantial. Sales in the secondary market may be subject to fees or charges. If you sell your Securities before maturity, you may have to do so at a substantial discount from the issue price and, as a result, you may suffer substantial losses. See “Secondary Market for Securities” in the program supplement.

Owning the Securities Is Not the Same as Owning the Underlying Securities or a Security Directly Linked to the Performance of the Indices

The return on your Securities will not reflect the return you would realize if you actually owned the Underlying Securities comprising the Indices or a security directly linked to the performance of the Indices and held such investment for a similar period because:

- the amount payable on the Securities may be subject to an upper limit or a cap;
- the return on your Securities may be subject to a participation rate which may reduce the return on your Securities;
- the return on your Securities may be reduced by an amount attributed to withholding taxes on dividends or other distributions paid on the Underlying Securities; and
- Index levels may not reflect the value of any dividends or other distributions paid on the Underlying Securities of an Index.

Even if Index levels appreciate from the initial Index level during the term of the Securities, the market value of the Securities may not increase by a corresponding amount. It is also possible for the market value of the Securities prior to maturity to decline while Index levels appreciate.

In addition, the tax treatment of holding your Securities generally will differ from the tax consequences of holding the Underlying Securities. You should consult your own tax advisor in this regard.

We Will Not Hold Underlying Securities for Your Benefit; You Will Not Have any Securityholder or Other Rights in Respect of any Underlying Securities

Investing in any Securities will not make you a holder of any of the Underlying Securities. You will not have any voting rights, redemption rights (if any), rights to receive dividends or other distributions or any other rights with respect to any of the Underlying Securities.

There is generally no restriction on our or our affiliates' ability to hedge, sell, pledge or otherwise convey all or any of the Underlying Securities of any Index acquired by us or them. Neither we nor our affiliates will hedge, pledge or otherwise hold any Underlying Securities for your benefit under any circumstances. Consequently, in the event of our bankruptcy, insolvency or liquidation, any such Underlying Securities owned by us or our affiliates will be subject to the claims of our creditors generally and will not be available for your benefit specifically.

Changes that Affect the Indices will Affect the Market Value of the Securities and the Amount Payable on the Securities

The policies of an Index Sponsor concerning the calculation of an Index, additions, deletions or substitutions of the Underlying Securities and the manner in which changes affecting those Underlying Securities or the issuers thereof, such as stock dividends, reorganizations or mergers, may be reflected in the relevant Index and could affect the amount payable on your Securities and the market value of your Securities prior to maturity. The amount payable on the Securities and their market value could also be affected if the Index Sponsor changes these policies, for example by changing the manner in which it calculates an Index, or if the Index Sponsor discontinues or suspends calculation or publication of an Index, in which case it may become difficult to determine the market value of the Securities. If events such as these occur, or if an Index level is not available because of a Market Disruption Event or for any other reason and no successor Index is selected, the Calculation Agent may determine such Index level and the amount payable on the Securities in a manner it considers appropriate, in its sole discretion, subject to confirmation by an Independent Calculation Expert if a determination contemplated to be made by the Calculation Agent in an Extraordinary Event involves the application of material discretion and is not based on information or calculation methodologies compiled, utilized or provided by, or derived from, independent third party sources (including hedge counterparties).

Extraordinary Events Will Affect the Return on the Securities

If an Extraordinary Event occurs, then we may accelerate the calculation and payment of the return (if any) on your Securities. Unless otherwise specified in the relevant pricing supplement, in such case you will receive the Accelerated Payment on your Securities on the Special Payment Date and, following payment of the Accelerated Payment, no further payments will be made on those Securities. As a result, you may lose substantially all of your investment. See “Description of the Index Linked Securities – Extraordinary Events” in this product supplement.

Trading and Other Transactions by Us or Our Affiliates in Underlying Securities or Derivative Products on Underlying Securities or Indices May Impair the Market Value of the Securities

We or one or more of our affiliates may hedge our obligations under the Securities by purchasing or selling:

- Underlying Securities; or
- futures contracts, options or other derivatives relating to Underlying Securities or Indices;

and we may adjust these hedges by, among other things, purchasing or selling any of the foregoing at any time. Although they are not expected to, any of these hedging activities may decrease the market price of Underlying Securities and/or Index levels, and, therefore, decrease the market value of your Securities. It is possible that we or our affiliates could receive substantial returns from these hedging activities while the market value of your Securities declines.

We or our affiliates may also engage in trading in Underlying Securities and other investments relating to those interests or an Index on a regular basis as part of our general broker-dealer and other businesses, for proprietary accounts, for other accounts under management or to facilitate transactions for customers, including block transactions. Any of these activities could decrease the market price of Underlying Securities and/or Index levels and, therefore, decrease the market value of your Securities. We or our affiliates may also issue or underwrite other securities or financial or derivative instruments with returns linked or related to changes in the performance of Underlying Securities or an Index. By introducing competing products into the marketplace in this manner, we or our affiliates could adversely affect the market value of your Securities.

We Are Not Responsible for the Public Disclosure of Index Sponsors

Where we are not, and are not related to, an Index Sponsor, such Index Sponsor will not be involved in the offering of any Securities under our Senior Note Program, will have no obligation of any sort with respect to the Securities and will have no obligation to take your interests into consideration for any reason, including in taking any actions that might affect the value of the Securities.

Where we are not, and are not related to, an Index Sponsor, we will not verify the accuracy or completeness of the information about such Index Sponsor or the relevant Index contained in any pricing supplement or in any of the Index Sponsor's publicly available information or determine if there has been any omission by any 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 any Index Sponsor which may affect the significance or accuracy of such information. We do not make any representation that such publicly available documents or any other publicly available information regarding any Index or Index Sponsor are accurate or complete. See “Description of the Index Linked Securities – Indices – Indices and Index Sponsors” in this product supplement.

Uncertain Return Until Maturity

The return, if any, on the Securities will be uncertain until maturity. Whether there is a return on the Securities will depend on the performance of the Indices and the amount, if any, of any principal repayments or other payments on the Securities over the term of the Securities (as specified in the applicable pricing supplement). There can be no assurance that the Securities will generate a positive return or that the objectives of the Securities will be achieved. Depending on the performance of the Indices and the amount, if any, of any principal repayments or other payments on the Securities over the term of the Securities (as specified in the applicable pricing supplement), holders may not be repaid the amount they invested in the Securities (subject to the portion of the principal of your Securities that is

protected). 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 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 an Index changes during 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.

Payments May Be Reduced

If payments under the Securities are computed by reference to dividends or other distributions in respect of the Underlying Securities, the amount of such payments may be reduced by an amount in respect of taxes notionally payable in respect of such dividends or other distributions as provided in the applicable pricing supplement. There can be no assurance that a change in applicable laws or the application thereof would not result in greater reductions.

Delay in Determining Index Levels

The occurrence of an Extraordinary Event may delay the determination of an Index level and consequently delay the determination, and payment, of the return on your Securities. See “Description of the Index Linked Securities – Extraordinary Events” in this product supplement.

We May Be Permitted to Redeem your Securities Prior to their Maturity

If specified in the pricing supplement for your Securities, we may have the right to redeem your Securities prior to their maturity date. If we redeem, or “call” the Securities prior to their maturity, your investment will terminate and you will not be entitled to any appreciation in Index levels or any regular payment of interest or principal, if applicable, after such redemption. Unless the redemption feature of your Securities is expressed in the applicable pricing supplement to be mandatory or automatic upon the occurrence of specified events, there is no assurance that we will exercise any right of early redemption that we may have.

Credit Ratings

The Securities have not been and will not be rated. There can be no assurance that any rating agency would be willing to assign a rating to the Securities, or that if the Securities were rated, they would have the same rating as any other unsubordinated indebtedness of the Bank that is rated.

Our Business Activities May Create Conflicts of Interest

We and our affiliates expect to engage in trading activities related to Underlying Securities, which activities will not be for the account of holders of Securities and will not be undertaken on your behalf. These trading activities may present a conflict between your interest in Securities and our affiliates’ interests in proprietary accounts and in facilitating transactions (including options and other derivatives transactions) for customers and in accounts under our or our affiliates’ management. These trading activities could influence the value of Underlying Securities or Index levels in a manner adverse to your interests. We and our affiliates may, at present or in the future, engage in business with the issuers of Underlying Securities, including making loans to or providing advisory services (including investment banking and merger and acquisition advisory services) to issuers of Underlying Securities. These activities may present a conflict between our or our affiliates’ interests and your interests. Moreover, we and our affiliates may have published, and in the future expect to publish, research reports with respect to the issuers of Underlying Securities. This research may be modified from time to time without notice and may express opinions or make recommendations that are inconsistent with purchasing or holding the Securities. Any of these activities by us or our affiliates may affect the level, price or value of the Underlying Securities or the Indices and, therefore, the market value of your Securities. We will carry on business, including with respect to our dividend policy, without regard to the effect that our decisions will have on the Securities. See “Dealings in Underlying Securities” in this product supplement.

There Are Potential Conflicts of Interest if We Are, or Are Related to, the Index Sponsor

We or one or more of our affiliates may be an Index Sponsor. In certain circumstances, our role and responsibilities as an Index Sponsor may give rise to conflicts of interest. Even though Indices will be calculated in accordance with certain principles or rules, such calculations require certain judgments and decisions to be made. If we are, or are related to, an Index Sponsor, we will be directly or indirectly responsible for these judgments and decisions. Determinations made by an Index Sponsor could affect the level of the applicable Index. Further, in certain circumstances where one of our affiliates is an Index Sponsor, there may be a conflict of interest between us and such affiliate as the Index Sponsor and our role in trading Underlying Securities and derivative instruments. We or our affiliates may hedge the market risks to us associated with our obligations to pay the amounts due on the Securities. We or our affiliates expect to make a profit in connection with these arrangements.

There Are Potential Conflicts of Interest Between You and the Calculation Agent

The Calculation Agent will, among other things, decide the amount payable on your Securities. We may change the Calculation Agent after the issue date of any Securities without notice to you. See “Description of the Securities – Calculation Agent” in the program supplement. The Calculation Agent will exercise judgment when performing its functions. For example, the Calculation Agent may have to determine whether an Extraordinary Event has occurred and whether the event has materially interfered with our ability or the ability of one of our affiliates to hedge our positions, subject to confirmation by an Independent Calculation Expert if a determination contemplated to be made by the Calculation Agent in an Extraordinary Event involves the application of material discretion and is not based on information or calculation methodologies compiled, utilized or provided by, or derived from, independent third party sources (including hedge counterparties). Since these determinations by the Calculation Agent will affect the payment on your Securities, the Calculation Agent may have a conflict of interest if it needs to make any such decisions.

Historical Performance of Underlying Securities or an Index Should Not Be Taken as an Indication of Future Performance

The performance of any Underlying Securities will affect Index levels and, therefore, the value of your Securities. The historical performance of Underlying Securities or an Index is not necessarily an indication of the future performance of such Underlying Securities or the Index. As a result, it is impossible to predict whether the value of Underlying Securities or Index levels will rise or fall during the term of your Securities. The value of Underlying Securities and Index levels will be influenced by complex and interrelated political, economic, financial and other factors. See “Historical Index Level Information” in this product supplement.

Non-Canadian Investors May Be Subject to Certain Additional Risks

Unless otherwise specified in a pricing supplement, the Securities will be denominated in Canadian dollars. If you are a non-Canadian investor who purchases the Securities with a currency other than Canadian dollars, changes in exchange rates may have an adverse effect on the value, price or income of your investment.

If you are a non-Canadian investor you should consult your tax advisors as to the consequences, under the tax laws of the country where you are resident for tax purposes, of acquiring, holding and disposing of the Securities and receiving payments of principal or other amounts under the Securities and of any Canadian withholding tax consequences of holding and disposing of Securities.