

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**

Equity, Unit and Debt 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 equity securities, to units of one or more investment funds or to one or more debt or debt-like securities, or a combination thereof, 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 equity, unit and debt 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 securities or a portfolio of securities, or any combination of the foregoing, during the term of your Securities. The Securities are designed for investors seeking exposure to, and who are prepared to assume the risks associated with an investment linked to, the specified securities.

An investment in the Securities involves risks. If you purchase Securities, you will be exposed to fluctuations in interest rates and changes in the prices of the securities to which the Securities are linked. The price or value of such securities may be volatile and an investment linked to such securities 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 to which the Securities are linked. **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.**

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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 Equity, Unit and Debt 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 equity, unit and debt 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.

Underlying Securities and Underlying Security Issuers

Securities issued hereunder will be linked to:

- one or more equity securities;
- units of one or more investment funds (including exchange traded funds);
- one or more debt or debt-like securities;
- a basket of two or more of any combination of the foregoing; or
- the performance of any one of the foregoing securities (or a basket thereof) that achieves a particular ordinal rank among a group of two or more of the foregoing securities (or a basket or baskets thereof), such as the worst performing security (or basket of securities).

The securities 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 equity securities, investment funds and/or debt or debt-like securities, the relevant pricing supplement will indicate the relative weighting of such securities in the basket and any other compositional or weighting factors relevant to such basket. In this product supplement, references to “**Underlying Securities**” mean the securities to which particular Securities are linked and references to “**Underlying Security**” means one of the Underlying Securities.

When we refer to an “**Underlying Security Issuer**”, we mean the issuer of the Underlying Securities to which your Securities are linked as specified in the applicable pricing supplement, and in cases where the Underlying Securities are units of an investment fund (including an exchange traded fund), we mean the fund and/or the manager, investment advisor and/or fund sponsor of, the Underlying Securities to which your Securities are linked.

In cases where the Underlying Security Issuer is an investment fund (including an exchange traded fund) that seeks to replicate or correspond to the performance of one or more indices or that tracks the performance of one or more commodities, we refer to such index or indices as the “**Tracked Index**”, such commodity or commodities as the “**Tracked Commodity**” and the index sponsor of any Tracked Index as the “**Tracked Index Sponsor**”.

In the cases where the performance of any Securities will be linked to debt or debt-like securities, the description of the debt or debt-like securities (and any relevant risk factors related thereto that are not described herein) will be set out 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 Underlying Security Issuer. Where we are not, and are not related to, an Underlying Security Issuer:

- the Securities have not been passed on by such Underlying Security Issuer or the Tracked 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 Underlying Security Issuer or the Tracked Index Sponsor;
- the trade names, service marks, trademarks or registered trademarks of such Underlying Security Issuer or Tracked Index are the property of their owner;
- the Underlying Security Issuer and the Tracked Index Sponsor make no warranties and bear 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 Underlying Securities, the Underlying Security Issuer, or any Tracked Index, Tracked Commodity or Tracked 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 Underlying Securities, the Underlying Security Issuer or any Tracked Index, Tracked Commodity or Tracked 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 value of the Underlying Securities (and therefore the price of the Underlying Securities 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 Underlying Securities, an Underlying Security Issuer, or any Tracked Index, Tracked Commodity or Tracked Index Sponsor could affect the amount payable on your Securities and therefore the market value of the Securities in the secondary market, if any.

Information regarding Underlying Securities or Underlying Security Issuers may be obtained from various public sources including, but not limited to, the Underlying Security Issuers' public disclosure documents filed with securities regulators and on the Underlying Securities Issuers' websites and other information publicly disseminated by Underlying Security Issuers. Where we are not, and are not related to, an Underlying Security Issuer, any and all information regarding Underlying Securities or Underlying Security Issuers included in any pricing supplement will be derived from such publicly available information.

The inclusion or exclusion of specific securities in the Underlying Securities is not a recommendation to invest in or divest such Underlying Securities. We make no representation to you as to the performance of any Underlying Security, Tracked Index, Tracked Commodity or constituents of any Tracked Index.

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 Underlying Securities, determined as specified in the applicable pricing supplement. The performance of each Underlying Security, including any other factor about the Underlying Security that is relevant to the payments that may be made on Securities from time to time, will be measured from the value of the Underlying Security at one or more points in time to the value of the Underlying Security at a subsequent point in time, in each case determined as specified in the applicable pricing supplement. Measurement of the value of the Underlying Securities may be determined by reference to trading or closing prices of the Underlying Securities or determined in accordance with a specified formula or other method of calculation and may occur at one or more intervals over the term of the Securities, all as specified in the applicable pricing supplement. Measurement of any other factors relating to the Underlying Securities relevant to payments that may be made on Securities from time to time will be determined as specified in the applicable pricing supplement. The percentage change in the value of the Underlying Securities 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 the value of the Underlying Securities 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 the value of the Underlying Securities 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 value of the Underlying Securities at one point in time relative to the value of the Underlying Securities at one or more other points, all as specified in the applicable pricing supplement. No other values of the Underlying Securities 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 the value of the Underlying Securities is positive at certain times during the term of the Securities, before falling to a value 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 Underlying Security, the value of one Underlying Security could increase over the term of the Securities but be offset or negated by decreases in the values of the other Underlying Securities.

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 Value of the Underlying Securities

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, the Underlying Securities 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 Securities 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

Adjustments relating to the Underlying Securities

If an Extraordinary Event occurs, then the Calculation Agent may, but is not required to, make such adjustments (other than Non-Permitted Adjustments) to any payment or other term of the Securities as it determines to be appropriate, acting in good faith, to account for the economic effect of such event on the Securities and determine the effective date of any such adjustment. Such permitted adjustments include, but are not limited to:

- deeming the Underlying Securities to be replaced by New Underlying Securities; and
- deeming the Underlying Security Issuer to be replaced by the issuer of such New Underlying Securities.

Delay in Determining Value of the Underlying Securities

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 the value of any Underlying Security is to be determined, then the day on which such value will be determined will instead be the earlier of (1) the next Exchange Day for the applicable Underlying Security on which there is no such Extraordinary Event, and (2) the fifth day that would otherwise have been an Exchange Day for such Underlying Security following the day on which the value of the Underlying Security 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 value of such Underlying Security on such day using, to the extent possible, the value for such Underlying Security 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 Underlying Security value determination will be postponed to the first Business Day after the value of all of the Underlying Securities 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 value of the applicable Underlying Securities as at the Accelerated Valuation Date relative to the value of the applicable Underlying Securities as at the initial valuation date for the applicable Underlying Security (as specified in the applicable pricing supplement), the prevailing level of interest rates, the volatility of the Underlying Securities 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.

- **“Delisting”** means an announcement by an Exchange that, pursuant to the rules of such Exchange, an Underlying Security ceases (or will cease) to be listed, traded or publicly quoted on such Exchange for any reason (other than a Merger Event or Tender Offer) and is not immediately re-listed, re-traded or re-quoted on an exchange or quotation system located in the same country as the Exchange (or, where the Exchange is within the European Union, in any member state of the European Union).
- **“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 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 Underlying Securities;
 - (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 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) the payment of an extraordinary distribution or an extraordinary dividend by an Underlying Security Issuer on an Underlying Security (where the characterization of a dividend or distribution as “extraordinary” will be determined in good faith by the Calculation Agent);
 - (v) 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 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;
 - (vi) an event that has a dilutive or concentrative effect on the value of any of the Underlying Securities;

- (vii) an adjustment is made to the exercise, settlement, payment or other terms of futures contracts, options or other derivatives on any of the Underlying Securities traded on an Exchange;
- (viii) a Merger Event;
- (ix) a Tender Offer;
- (x) a Hedging Event; or
- (xi) if the Underlying Securities are investment fund units:
 - a distribution or dividend from the assets of the fund to existing holders of fund units of property other than fund units or cash;
 - a distribution or dividend to existing holders of fund units of (i) additional fund units, (ii) other securities granting the right to payment of distributions and/or the proceeds of liquidation of the assets of the fund, or (iii) any other type of securities, rights or warrants or other assets of or relating to the fund, in any case for payment (cash or other) to the fund in respect of the fund at less than the prevailing market price as determined by us;
 - an extraordinary distribution or an extraordinary dividend from the assets of the fund (where the characterization of a dividend or distribution as “extraordinary” will be determined in good faith by the Calculation Agent);
 - a call against the assets of the fund that is not fully paid;
 - a repurchase of fund units using the assets of the fund, whether out of profits or capital of the fund and whether the consideration for such repurchase is cash, securities or otherwise, other than redemptions of fund units in the normal course;
 - the investment objectives of the fund are amended in any material respect;
 - the activities of the fund manager are under investigation by applicable regulators for reasons of material wrongdoing or material breach of any rule or regulation;
 - subscriptions or redemptions of fund units have been suspended or such subscriptions are no longer available to us;
 - a material fee is added to the management fee, subscription price or redemption price of fund units;
 - the fund manager ceases to act in such capacity of the fund; or
 - a material modification or the occurrence of any event or change having a material adverse effect on the fund units.
- **“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 Underlying Security, the occurrence of any of the following events:
 - (i) in the case of equity securities or units of exchange traded funds:
 - the Delisting of an Underlying Security; or
 - a suspension, absence or material limitation of trading on an Exchange for one or more Underlying Securities or futures contracts, options or other derivatives relating to the Underlying Securities, including a limitation on trading on any relevant Exchange on any one day by reason of movements in prices that exceed the price permitted by such Exchange;
 - (ii) the failure of an Underlying Security Issuer to announce or publish an applicable fund unit price or the inability of an investor in the normal course to buy, sell, redeem or settle a transaction in respect of units of an applicable investment fund or to obtain a price or value for the units of an applicable investment fund;
 - (iii) the temporary or permanent discontinuance, cessation or unavailability of an applicable investment fund where no successor fund is selected by the Calculation Agent within five Exchange Days of the discontinuance, cessation or unavailability of such investment fund; or
 - (iv) the occurrence of a material change in the content, composition or constitution of the Underlying Securities.

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.

- **“Merger Event”** means, with respect to an Underlying Security, any:
 - (i) reclassification or change of such Underlying Security that results in a transfer or an irrevocable commitment to transfer all of such Underlying Securities to another entity or person;
 - (ii) consolidation, amalgamation, merger or binding share exchange of the Underlying Security Issuer with or into another entity or person (unless the Underlying Security Issuer is the continuing entity and not all of such Underlying Securities are reclassified or changed);
 - (iii) takeover offer, tender offer, exchange offer, solicitation, proposal or other event by an entity or person to purchase or otherwise obtain 100% of the outstanding Underlying Securities of such Underlying Security Issuer that results in a transfer of or irrevocable commitment to transfer all such Underlying Securities (other than those owned or controlled by such entity or person);

- (iv) consolidation, amalgamation, merger or binding share exchange of the Underlying Security Issuer or its subsidiaries with or into another entity in which the Underlying Security Issuer is the continuing entity and which results in the outstanding Underlying Securities (other than Underlying Securities owned or controlled by such other entity) prior to such event being less than 50% of the outstanding Underlying Securities immediately after such event; or
 - (v) such other event having substantially the same effect as the events described above.
- **“New Underlying Securities”** means any securities involved in a Merger Event or Tender Offer or the securities of the entity or person (other than the Underlying Security Issuer) involved in the Merger Event or Tender Offer or a third party that are, as of the date of closing of the related Merger Event or Tender Offer, promptly scheduled to be publicly quoted, traded or listed on an exchange or quotation system located in the same country (or where the Exchange is within the European Union, in any member state of the European Union) as the Exchange.
 - **“Non-Permitted Adjustments”** means any adjustment made to accounts solely for changes in volatility, expected dividends (that are not extraordinary distributions or extraordinary dividends) or liquidity relevant to the Underlying Securities.
 - **“Tender Offer”** means a takeover bid, takeover offer, tender offer, exchange offer, solicitation, proposal or other event by any entity or person that results in such entity or person purchasing, or otherwise obtaining or having the right to obtain, greater than 10% and up to 100% of the Underlying Securities of the Underlying Security Issuer.

Independent Calculation Experts

If, in connection with an Extraordinary Event or Substitution 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.

Adjustments upon the occurrence of a Substitution Event

In addition to the foregoing adjustments that may be made upon the occurrence of an Extraordinary Event, if so disclosed in the pricing supplement for your Securities, upon the occurrence of a Substitution Event, the Calculation Agent may be entitled to make certain adjustments to a notional portfolio of Underlying Securities, including but not limited to, removing securities of an Underlying Security Issuer from the notional portfolio and substituting them with securities of a different Underlying Security Issuer. Any entitlement to do so will be disclosed in the applicable pricing supplement.

In connection with a Substitution Event, the following terms have the meanings set out below:

- **“Insolvency”** means, in respect of an Underlying Security, that by reason of the voluntary or involuntary liquidation, bankruptcy, insolvency, dissolution or winding-up of or any analogous proceeding affecting the applicable Underlying Security Issuer, (i) all the relevant Underlying Securities, or other securities, of such Underlying Security Issuer are required to be transferred to a trustee, liquidator or other similar official or (ii) holders of the Underlying Securities of such Underlying Security Issuer become legally prohibited from transferring them.
- **“Nationalization”** means, in respect of an Underlying Security, that all or substantially all such Underlying Securities, or other securities, or all or substantially all the assets of the applicable Underlying Security Issuer are nationalized, expropriated or otherwise required to be transferred to any governmental agency, authority or entity.

- **“Substitution Event”** means, in respect of an Underlying Security: (i) any event, circumstance or cause which has restricted or will restrict the ability of a party to acquire, place, establish, re-establish, substitute, maintain, modify, unwind or dispose of any hedge transaction in respect of the Underlying Security or to realize, recover or remit the proceeds of any such hedge transaction; (ii) any actual or proposed Nationalization, Insolvency or Delisting in respect of such Underlying Security; (iii) any Merger Event or Tender Offer that has been announced in respect of such Underlying Security that is deemed by the Calculation Agent to be a Substitution Event, in its sole and absolute discretion; (iv) the occurrence and continuation for at least five consecutive Exchange Days of a Market Disruption Event in respect of such Underlying Security; or (v) the payment of an extraordinary distribution or an extraordinary dividend by an Underlying Security Issuer on an Underlying Security (where the characterization of a dividend or distribution as “extraordinary” will be determined in good faith by the Calculation Agent).

Discontinuation of an Investment Fund

If the price or value of units of an Underlying Security Issuer that is an investment fund which is required for determination of any amount payable on a Security is not announced or published by the applicable Underlying Security Issuer 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 fund unit price or value, which third party is acceptable to the Calculation Agent, then the applicable fund unit price or value will be determined by reference to the price or value as so calculated and announced by such third party.

If at any time an Underlying Security Issuer or the third party ceases to announce or publish the applicable fund unit price or value, 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 fund (the **“discontinued fund”**), 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 fund, then the Calculation Agent may designate another fund (a **“successor fund”**) to replace such fund, provided that the successor fund substantially and transparently tracks the market performance of the broad local market or markets in respect of the Underlying Securities included in the discontinued fund, 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 Trading Price Information

We may provide historical trading prices on Underlying Securities to which your Securities are linked in the pricing supplement for your Securities. You should not take any such historical trading prices for Underlying Securities as an indication of future performance. We cannot give you any assurance that the trading prices of the Underlying Securities 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 trading prices for Underlying Securities 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 values of the Underlying Securities 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, or any Tracked Commodity or the constituent securities of any Tracked 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 or with the Underlying Security Issuers or in the constituent securities of any Tracked Index, 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 Underlying Securities 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 to which the Securities are linked, or in any Tracked Commodity or the constituent securities of any Tracked Index. 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 value of the Underlying Securities 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 value of the Underlying Securities rises at certain periods during the term of the Securities. In addition, the value of one or more Underlying Securities could increase over the term of the Securities, but be offset or negated by decreases in the values of other Underlying Securities 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 that are, or comprise, or that seek to replicate or correspond to the performance of, equity 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.

Exposure to Foreign Investments May Be Subject to Additional Risks

Underlying Securities that are, or comprise, or that seek to replicate or correspond to the performance of, foreign securities, foreign interest rates, and foreign securities markets, may be more volatile than Canadian securities, interest rates and securities markets. Direct or indirect government intervention to stabilize foreign markets, as well as cross shareholding in foreign issuers, may affect trading prices, rates 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 Underlying Securities may be affected by currency fluctuations and volatility.

Dependence on Management

Managed investment funds or portfolios, including Underlying Securities that are managed funds or portfolios, depend on the skill and acumen of the management of such funds and portfolios. The individual managers will not devote all of their time to the business of such funds and portfolios. If such managers should cease to participate in the management of the funds and portfolios, the ability to select attractive investments and manage the funds and portfolios could be severely impaired. There can be no assurance that: (a) the investment objectives of the funds or portfolios will be realized; (b) the investment strategies of the funds or portfolios will be successful; or (c) where applicable, the distribution policy of the assets in the funds or portfolios can be maintained. Past performance of the management is not indicative of future returns.

Passive Investment Risk

Where the Underlying Securities are, or comprise, units of investment funds (including exchange traded funds) that seek to replicate or correspond to the performance of a Tracked Index with no active management, the Underlying Security Issuer will not be actively managed by a fund manager. Accordingly, the fund manager will not attempt to take defensive positions in declining markets and the adverse financial condition of a constituent in the Tracked Index may not result in the elimination of the constituent security in the Underlying Security Issuer's investment portfolio unless such constituent security is removed from the Tracked Index.

Tracking Error

Where the Underlying Securities are, or comprise, units of investment funds (including exchange traded funds) that seek to replicate or correspond to the performance of a Tracked Index, the Underlying Securities may underperform, or otherwise diverge from the performance of, the Tracked Index. Factors which may cause the performance of the Underlying Securities to diverge from the performance of the Tracked Index include, but are not limited to:

- the ability of the fund sponsor or fund manager to perform its obligations with respect to the fund's investment objectives;
- the investment fund may not fully replicate the Tracked Index;
- the temporary unavailability of certain constituent securities of the Tracked Index;
- differences in trading hours between the investment fund and the Tracked Index;
- differences in currencies between the investment fund and the Tracked Index; and
- the performance of any derivative instruments contained in the investment fund.

Trading Below Net Asset Value

Units of an investment fund may trade below their net asset value and may be subject to fluctuations due to changes in the market value of its constituent securities, which may adversely affect the value of your Securities.

Counterparty Credit and Borrowing Risk

From time to time, an investment fund may engage in securities lending and may also invest in derivatives, activities which could expose the investment fund to the credit risk that a counterparty may be unable to meet its obligations, resulting in a loss to the investment fund. An investment fund may also borrow cash to fund dividends and distributions to holders of units of the investment fund in advance of receiving such amounts from the applicable constituent, which could expose the investment fund to the risk of defaulting on its obligations to the lender and the risk of having to repay such borrowed amounts through disposition of the investment fund's assets. These events may adversely affect the performance of the Underlying Securities that are, or comprise, units of investment funds, and therefore could negatively impact the value of your Securities linked to such Underlying Securities.

The Commodities Markets are Volatile

Where the Underlying Securities are, or comprise, units of investment funds (including exchange traded funds) that seek to replicate or correspond to the performance of a Tracked Commodity, the Underlying Securities are susceptible to the high volatility of commodity prices. Prices of commodities can be impacted by a variety of factors, including changes in supply and demand (whether actual, perceived, anticipated, unanticipated or unrealized), economic activity, geographical and political events, domestic and foreign government policies, fiscal monetary and exchange control programs, changes in interest rates, labour disruptions, price ceilings imposed by exchange or regulatory authorities, and weather phenomena. Such events tend to have global impacts on commodity prices, regardless of where the event took place. Speculative activity and market expectations with respect to such

events can also result in price fluctuations. These factors and events may adversely affect the performance of the Underlying Securities that are, or comprise, units of investment funds (including exchange traded funds) that seek to replicate or correspond to the performance of a Tracked Commodity, and therefore could negatively impact the value of your Securities linked to such Underlying Securities.

Disruptions in Supply and Demand of Tracked Commodities May Negatively Impact the Value of Your Securities

The prices of commodities may fluctuate widely as a result of supply and demand disruptions, particularly in areas of major production or consumption of a particular commodity. Where production of a particular commodity is concentrated in a limited number of areas or controlled by a limited number of producers, changes affecting such areas or producers could have a disproportionate impact on the prices of the particular commodity. Similarly, where commodities are used primarily in one sector, changes in the level of activity in such sector may have a disproportionate effect on global demand for a particular commodity. These factors and events may adversely affect the performance of the Underlying Securities that are, or comprise, units of investment funds (including exchange traded funds) that seek to replicate or correspond to the performance of a Tracked Commodity, and therefore could negatively impact the value of your Securities linked to such Underlying Securities.

Trading Suspension or Disruptions in Tracked Commodities and Related Futures May Negatively Impact the Value of Your Securities

Trading in commodities and related futures contracts is highly speculative. The commodities futures market can be impacted by a variety of factors, including lack of liquidity in the markets, participation by speculators, and regulatory and government intervention. Current and spot prices of commodities may also affect the prices of futures contracts in respect of such commodities in a volatile and unpredictable manner. In addition, certain futures exchanges impose daily price fluctuation limits on the maximum or minimum price of a futures contract. As trades may not be effected outside such limit prices, such limit prices could have the effect of precluding trading in a particular contract or forcing the liquidation of contracts at disadvantageous times or prices. These factors and events may negatively affect the performance of the Underlying Securities that are, or comprise, units of investment funds (including exchange traded funds) that seek to replicate or correspond to the performance of a Tracked Commodity, and therefore could negatively impact the value of your Securities linked to such Underlying Securities.

The Debt Markets Are Volatile

Debt securities, including Underlying Securities that are, or comprise, or that seek to replicate or correspond to, the performance of, debt 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 debt markets generally and the perceptions of a specific issuer or issuers of debt 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.

Securities Linked to One Underlying Security or a Limited Number of Underlying Securities Only May Be Subject to Concentration Risk

Securities that are linked to one Underlying Security or a limited number of Underlying Securities 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. In addition, where the Underlying Securities are units of investment funds (including exchange traded funds), the degree of concentration risk will depend on the investment objectives of the funds as well as the constituent securities of the funds.

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 Underlying Securities 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 value of Underlying Securities 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, or any applicable commodity markets, generally and which may affect the value of Underlying Securities;
- 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 Any Tracked Commodity or the Constituent Securities of any Tracked Index

The return on your Securities will not reflect the return you would realize if you actually owned the Underlying Securities or any Tracked Commodity or the constituent securities of any Tracked Index 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
- the value of Underlying Securities may not reflect the value of any dividends or other distributions paid on the Underlying Securities or on the constituent securities of any Tracked Index.

Even if the value of the Underlying Securities appreciates from the initial value of such Underlying Securities during the term of the Securities, the market value of the Securities prior to maturity may not increase by a corresponding

amount. It is also possible for the market value of the Securities prior to maturity to decline while the value of the Underlying Securities appreciates.

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, Tracked Commodity or Constituent Securities of any Tracked Index

Investing in any Securities will not make you a holder of any of the Underlying Securities, Tracked Commodities or constituent securities of any Tracked Index. 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 or constituent securities of any Tracked Index.

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, Tracked Commodities or constituent securities of any Tracked Index acquired by us or them. Neither we nor our affiliates will hedge, pledge or otherwise hold any Underlying Securities, Tracked Commodities or constituent securities of the Tracked Indices for your benefit under any circumstances. Consequently, in the event of our bankruptcy, insolvency or liquidation, any such Underlying Securities, Tracked Commodities or constituent securities of any Tracked Index 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 Underlying Securities, and to the Extent that the Underlying Securities Seek to Replicate or Correspond to a Tracked Index, Changes that Affect the Tracked Index, Will Affect the Market Value of the Securities and the Amount Payable on the Securities

Changes affecting the Underlying Securities or the Underlying Security Issuers, such as stock dividends, reorganizations or mergers, and changes in the policies of the Tracked Index Sponsor concerning the calculation of such Tracked Index, additions, deletions or substitutions of its constituent securities, may be reflected in the value of the relevant Underlying Securities and could affect the amount payable on your Securities and the market value of your Securities prior to maturity. If events such as these occur, or if the value of Underlying Securities is not determinable because of a Market Disruption Event or for any other reason, the Calculation Agent may determine the value of Underlying Securities 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 or Substitution 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).

Substitution Events

Certain events may constitute Substitution Events, whereby the Calculation Agent may be entitled to substitute the securities of an Underlying Security Issuer for another Underlying Security Issuer in the circumstances described under "Description of the Equity, Unit and Debt Linked Securities – Adjustments upon the occurrence of a Substitution Event" in this product supplement. Such events or actions may affect the value of your Securities.

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 Equity, Unit and Debt Linked Securities – Extraordinary Events" in this product supplement.

You Will Have Limited Anti-dilution Protection

The Calculation Agent for your Securities may adjust the value of Underlying Securities for the purposes of determining the return on your Securities for stock or unit splits, reverse stock or unit splits, stock dividends, distributions, extraordinary dividends or extraordinary distributions and other events that affect the Underlying Security Issuer's capital structure, but only in the circumstances described under "Description of the Equity, Unit and Debt Linked Securities – Extraordinary Events – Adjustments relating to the Underlying Securities" in this product supplement. The Calculation Agent is not required to make an adjustment for every corporate or fund event that may affect an Underlying Security. For example, unless otherwise specified in the relevant pricing supplement, the Calculation Agent will not make adjustments for events such as an offering of an Underlying Security for cash by the Underlying Security Issuer, a tender or exchange offer for an Underlying Security at a premium to its then-current market price by the Underlying Security Issuer or a tender or exchange offer for less than all outstanding shares or units of the Underlying Security Issuer by a third party. Such events or other actions by the Underlying Security Issuer or a third party may nevertheless adversely affect the value of your Securities.

Trading and Other Transactions by Us or Our Affiliates in Underlying Securities, Tracked Commodities or Constituent Securities of any Tracked Index or Derivative Products on the Underlying Securities, Tracked Commodities or Constituent Securities of any Tracked Index 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, Tracked Commodities or constituent securities of any Tracked Index; or
- futures contracts, options or other derivatives relating to Underlying Securities, Tracked Commodities or constituent securities of any Tracked Index;

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, 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, Tracked Commodities or constituent securities of any Tracked Index and other investments relating to those interests 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, 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. 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 Underlying Security Issuers or Tracked Index Sponsors

Where we are not, and are not related to, an Underlying Security Issuer or a Tracked Index Sponsor, such Underlying Security Issuer or Tracked 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 Underlying Security Issuer or a Tracked Index Sponsor, we will not verify the accuracy or completeness of the information about such Underlying Security Issuer or Tracked Index Sponsor or the relevant Underlying Security, Tracked Index or Tracked Commodity contained in any pricing supplement or in any of the Underlying Security Issuer's or Tracked Index Sponsor's publicly available information or determine if there has been any omission by any Underlying Security Issuer or Tracked 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 Underlying Security Issuer or Tracked 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 Underlying Security, Underlying Security Issuer, Tracked Index, Tracked Index Sponsor or Tracked Commodity are accurate or complete. See “Description of the Equity, Unit and Debt Linked Securities – Underlying Securities and Underlying Security Issuers” 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 Underlying Securities 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 Underlying Securities 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 any Underlying Securities, Tracked Commodity or Tracked 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 the Value of Underlying Securities

The occurrence of an Extraordinary Event may delay the determination of the value of the Underlying Securities and consequently delay the determination, and payment, of the return on your Securities. See “Description of the Equity, Unit and Debt 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 the value of Underlying Securities 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.

If the Securities are linked to one or more debt or debt-like securities, there can be no assurances that any credit ratings that may be assigned to such debt or debt-like securities will remain in effect for any given period of time or that the ratings will not be withdrawn or revised at any time. Real or anticipated changes in credit ratings of the debt

or debt-like securities to which the Securities are linked may affect the market value of the applicable debt or debt-like securities and, in turn, the value of the Securities.

Our Business Activities May Create Conflicts of Interest

We and our affiliates expect to engage in trading activities related to the Underlying Securities, Tracked Commodities and constituent securities of Tracked Indices, 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 the Underlying Securities in a manner adverse to your interests. We and our affiliates may, at present or in the future, engage in business with Underlying Security Issuers and constituents of Tracked Indices, including making loans to or providing advisory services (including investment banking and merger and acquisition advisory services) to issuers of Underlying Securities and constituents of Tracked Indices. 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 Underlying Security Issuers and constituents of Tracked Indices. 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 price or value of the Underlying Securities 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, a Tracked Index Sponsor or if We Calculate Formulae or Models to which Securities are Linked

We or one or more of our affiliates may be a Tracked Index Sponsor or responsible for making calculations under models or formulae to which Securities are linked. In certain circumstances, our role and responsibilities in this capacity may give rise to conflicts of interest. Even though any Tracked Index, formula or model 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, a Tracked Index Sponsor, or if we are responsible for calculating a formula or model, we will be directly or indirectly responsible for these judgments and decisions. Determinations made by a Tracked Index Sponsor could affect the performance of the applicable Tracked Index and determinations of formulae or models by us may affect the performance of the applicable Securities. Further, in certain circumstances where one of our affiliates is a Tracked Index Sponsor, there may be a conflict of interest between us and such affiliate as the Tracked 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 or Substitution 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 or Substitution 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 Should Not Be Taken as an Indication of Future Performance

The performance of the Underlying Securities will affect the value of your Securities. The historical performance of Underlying Securities is not necessarily an indication of the future performance of such Underlying Securities. As a result, it is impossible to predict whether the value of Underlying Securities will rise or fall during the term of your Securities. The value of Underlying Securities will be influenced by complex and interrelated political, economic, financial and other factors. See "Historical Trading Price 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.