Pricing Supplement to Short Form Base Shelf Prospectus dated January 21, 2016,
the Prospectus Supplement thereto dated January 22, 2016, as supplemented August 31, 2017 and
the Prospectus Supplement thereto dated January 22, 2016, as supplemented August 31, 2017

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

This pricing supplement together with the short form base shelf prospectus dated January 21, 2016, the prospectus supplement dated January 22, 2016 and the prospectus supplement dated January 22, 2016, 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.

November 6, 2017

Royal Bank of Canada
Senior Note Program
Unit Linked Securities
Maximum $20,000,000 (200,000 Securities)
RBC Callable Yield Securities (CAD), Series 34
Due December 2, 2020
Non-Principal Protected Securities

Royal Bank of Canada (the "**Bank**") is offering up to $20,000,000 of RBC Callable Yield Securities (CAD), Series 34 (which we refer to as the "**Securities**" for the purpose of this pricing supplement only and not for the purpose of the "base shelf prospectus" as defined below), designed for investors who are prepared and can afford to take the risk that they will lose substantially all of their investment, that regular Interest Payments (defined herein) will not be made on the Securities, and that the Securities will be redeemed early, because they believe that the Closing Price (defined herein) of the units (the "**Underlying Securities**" and each, an "**Underlying Security**") of the SPDR® S&P Biotech ETF (the "**Fund**") will be greater than or equal to the Coupon Barrier Price (defined herein) but less than the Autocall Redemption Price (defined herein) on each Observation Date (defined herein) and that the Final Closing Price (defined herein) will be greater than or equal to the Protection Barrier Price (defined herein). Payment at maturity (if no early redemption has occurred) will be based on the price performance of the Underlying Securities. Holders of the Securities will also receive Interest Payments payable semi-annually on each Interest Payment Date (defined herein) each at a fixed amount of $4.00 per Security if there is a Digital Payout Event (defined herein) on the immediately preceding Observation Date. The return on the Securities is limited; even if a Digital Payout Event occurs on each Observation Date, the Securities are not redeemed prior to maturity and the Final Closing Price is greater than or equal to the Protection Barrier Price, the maximum return on the Securities would be equal to $24.00 per Security.

The initial estimated value of the Securities as of November 1, 2017 was $95.53 per Security, which is less than the price to the public and is not an indication of the actual profit to the Bank or its affiliates. The actual value of the Securities at any time will reflect many factors, cannot be predicted with accuracy, and may be less than this amount. We describe our determination of the initial estimated value in more detail below. See "Risk Factors" and "Preparation of Initial Estimated Value".

The Securities are described in this pricing supplement delivered together with our short form base shelf prospectus dated January 21, 2016 (the "**base shelf prospectus**"), the prospectus supplement establishing our Senior Note Program dated January 22, 2016, as supplemented August 31, 2017 (the "**program supplement**") and a prospectus supplement which generally describes equity, unit and debt linked securities that we may offer under our Senior Note Program dated January 22, 2016, as supplemented August 31, 2017 (the "**product supplement**").

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

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

Holders of the Securities will not be subject to United States withholding tax under Section 871(m) of the U.S. Internal Revenue Code.

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

Price: $100 per Security Minimum Subscription: $5,000 (50 Securities)			
	Price to public	**Selling Commissions and Dealer's fee(1)**	**Net proceeds to the Bank**
Per Security	$100.00	$2.00	$98.00
Total(2)	$20,000,000	$400,000	$19,600,000

(1) A commission of 2.00% of the Principal Amount of Securities issued under this offering will be paid to the Dealers (defined below) for further payment to representatives, including representatives employed by the Dealers, whose clients purchase the Securities. An agency fee will also be paid, from the Bank's own funds, to Raymond James Ltd. in an amount up to 0.15% of the Principal Amount of the Securities issued under this offering for acting as independent agent.

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

The Securities are offered severally by RBC Dominion Securities Inc. ("**RBC DS**") and Raymond James Ltd. (collectively, the "**Dealers**") as agents under a dealer agreement dated January 22, 2016, as amended or supplemented from time to time. **RBC DS is our wholly owned subsidiary. Consequently, we are a related and connected issuer of RBC DS within the meaning of applicable securities legislation.** See "Dealers" in this pricing supplement and "Plan of Distribution" in the program supplement.

The Securities will not be listed on any stock exchange. Securities may be resold using the FundSERV network at a price determined at the time of sale by the Calculation Agent (defined herein), which price may be lower than the Principal Amount of such Securities. The Securities will also be subject to specified early trading charges, depending on when the Securities are sold. There is no assurance that a secondary market for the Securities will develop or be sustained. See "Secondary Market for Securities", "Description of the Securities–Calculation Agent" and "Risk Factors" in the program supplement and "Secondary Market" in this pricing supplement.

Prospectus for Securities

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

Documents Incorporated by Reference

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

Marketing Materials

The version of the summary for the Securities that was filed with the securities commissions or similar regulatory authorities in each of the provinces and territories of Canada as "marketing materials" (as defined in National Instrument 41-101 − *General Prospectus Requirements*) on November 6, 2017 is deemed to be incorporated by reference into the base shelf prospectus solely for the purpose of our Senior Note Program and the Securities issued hereunder. Any version of marketing materials filed with the securities commission or similar regulatory authority in each of the provinces and territories of Canada in connection with this offering after the date hereof but prior to the termination of the distribution of the Securities under this pricing supplement (including any amendments to, or an amended version of, the marketing materials) is deemed to be incorporated by reference herein and in the base shelf prospectus solely for the purpose of our Senior Note Program and the Securities issued hereunder. Any such marketing materials are not part of this pricing supplement or the base shelf prospectus to the extent that the contents of the marketing materials have been modified or superseded by a statement contained in an amendment to this pricing supplement.

Caution Regarding Forward-Looking Statements

From time to time, we make written or oral forward-looking statements within the meaning of certain securities laws, including the "safe harbour" provisions of the *United States Private Securities Litigation Reform Act of 1995* and any applicable Canadian securities legislation. We may make forward-looking statements in the base shelf prospectus and in the documents incorporated by reference therein, in the program supplement, in the product supplement, in this pricing supplement, in other filings with Canadian regulators or the United States Securities and Exchange Commission, in reports to shareholders and in other communications. Forward-looking statements in, or incorporated by reference in, this prospectus include, but are not limited to, statements relating to our financial performance objectives, vision and strategic goals, the economic and market review and outlook for Canadian, U.S., European and global economies, the regulatory environment in which we operate, the outlook and priorities for each of our business segments, the risk environment including our liquidity and funding risk, and includes our President and Chief Executive Officer's statements. The forward-looking information contained in, or incorporated by reference in, this prospectus is presented for the purpose of assisting the holders of our securities and financial analysts in understanding our financial position and results of operations as at and for the periods ended on the dates presented, as well as our financial performance objectives, vision and strategic goals, and may not be appropriate for other purposes. Forward-looking statements are typically identified by words such as "believe", "expect", "foresee", "forecast", "anticipate", "intend", "estimate", "goal", "plan" and "project" and similar expressions of future or conditional verbs such as "will", "may", "should", "could" or "would".

By their very nature, forward-looking statements require us to make assumptions and are subject to inherent risks and uncertainties, which give rise to the possibility that our predictions, forecasts, projections, expectations or conclusions will not prove to be accurate, that our assumptions may not be correct and that our financial performance objectives, vision and strategic goals will not be achieved. We caution readers not to place undue reliance on these statements as a number of risk factors could cause our actual results to differ materially from the expectations expressed in such forward-looking statements. These factors – many of which are beyond our control and the effects of which can be difficult to predict – include: credit, market, liquidity and funding, insurance, operational, regulatory compliance, strategic, reputation, legal and regulatory environment, competitive and systemic risks and other risks discussed in the Risk management section of our management's discussion and analysis for the three- and nine-month periods ended July 31, 2017 (the "**Q3 2017 Management's Discussion and Analysis**") and in the Risk management and Overview of other risks sections of our management's discussion and analysis for the year ended October 31, 2016 (the "**2016 Management's Discussion and Analysis**") incorporated by reference herein; global uncertainty, the Brexit vote to have the United Kingdom leave the European Union (EU), weak oil and gas prices, cyber risk, anti-money laundering, exposure to more volatile sectors, technological innovation and new Fintech entrants, increasing complexity of regulation, data management, litigation and administrative penalties; the business and economic conditions in the geographic regions in which we operate; the effects of changes in government fiscal, monetary and other policies; tax risk and transparency; and environmental risk.

We caution that the foregoing list of risk factors is not exhaustive and other factors could also adversely affect our results. When relying on our forward-looking statements to make decisions with respect to us or the Securities, investors and others should carefully consider the foregoing factors and other uncertainties and potential events. Material economic assumptions underlying the forward-looking statements contained in this prospectus are set out in the Overview and outlook section and for each business segment under the heading Outlook and priorities in our 2016 Management's Discussion and Analysis, as updated by the Overview and outlook section of the Q3 2017 Management's Discussion and Analysis. Except as required by law, we do not undertake to update any forward-looking statement, whether written or oral, that may be made from time to time by us or on our behalf.

Additional information about these and other factors can be found in the Risk management section of our Q3 2017 Management's Discussion and Analysis and in the Risk management and Overview of other risks sections of our 2016 Management's Discussion and Analysis incorporated by reference in this prospectus.

Royal Bank of Canada
Senior Note Program
Unit Linked Securities
Maximum $20,000,000 (200,000 Securities)
RBC Callable Yield Securities (CAD), Series 34
Due December 2, 2020
Non-Principal Protected Securities

Issuer:	Royal Bank of Canada (the "**Bank**")
Dealers:	RBC Dominion Securities Inc. ("**RBC DS**") and Raymond James Ltd. Raymond James Ltd., a dealer to which we are neither related nor connected, participated in the due diligence activities performed by the Dealers in respect of the offering, but did not participate in the structuring and pricing of the offering or the calculation of the initial estimated value of the Securities. See "Plan of Distribution" in the program supplement.
Issue:	RBC Callable Yield Securities (CAD), Series 34 due December 2, 2020.
FundSERV Code:	RBC2934
Objective of the Securities:	The Securities have been designed for investors who are prepared and can afford to take the risk that they will lose substantially all of their investment, that regular Interest Payments (defined below) will not be made on the Securities, and that the Securities will be redeemed early, because they believe that the Closing Price (defined below) will be greater than or equal to the Coupon Barrier Price (defined below) but less than the Autocall Redemption Price (defined below) on each Observation Date (defined below) and that the Final Closing Price (defined below) will be greater than or equal to the Protection Barrier Price (defined below). Holders of the Securities will receive an Interest Payment on each Interest Payment Date (defined below) for which a Digital Payout Event (defined below) occurred on the immediately preceding Observation Date.
Issue Price:	The Securities will be issued at a price equal to their Principal Amount (defined below).
Minimum Investment:	50 Securities or $5,000.
Denomination:	Securities are issuable in denominations of $100 (the "**Principal Amount**") and in minimum increments of $100.
Issue Date:	December 1, 2017 or such other date as may be agreed to by the Bank and the Dealers.
Issue Size:	The maximum issue size will be an aggregate amount of $20,000,000.
Maturity Date:	December 2, 2020 (approximately a three-year term), subject to earlier redemption on an Autocall Redemption Event (defined below) or earlier repayment in full on an Extraordinary Event. See "Description of the Equity, Unit and Debt Linked Securities – Maturity Date and Amount Payable" in the product supplement.
Principal at Risk Securities:	All but 1% of the Principal Amount of the Securities is fully exposed. You could lose substantially all of your investment. See "Description of the Equity, Unit and Debt Linked Securities — Principal at Risk Securities" and "Risk Factors" in the product supplement.
Underlying Securities:	The return on the Securities is linked to the Closing Price of the units (the "**Underlying Securities**" and each, an "**Underlying Security**") of the SPDR® S&P Biotech ETF (the "**Fund**"). See "Description of the Equity, Unit and Debt Linked Securities – Underlying Securities and Underlying Security Issuers" in the product supplement. See Appendix A to this pricing supplement for summary information regarding the Fund. Securities do not represent an interest in the Underlying Securities or in the component securities comprising the Fund's investment portfolio. The Fund invests primarily in and holds the securities of the constituents of the S&P® Biotechnology Select

Industry™ Index (the "**Tracked Index**"). Holders of the Securities will have no right or entitlement to the Underlying Securities, the Fund or the securities comprising the Tracked Index, including, without limitation, redemption rights (if any), voting rights or rights to receive dividends or other distributions paid on any of such securities (the annual dividend yield on the Underlying Securities as of November 1, 2017 was 0.180% representing an aggregate dividend yield of approximately 0.540% compounded annually over the three-year term, on the assumption that the dividend yield remains constant). There is no requirement for the Bank to hold any interest in the Underlying Securities or in the securities comprising the Tracked Index.

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

See "Description of the Equity, Unit and Debt Linked Securities – Underlying Securities and Underlying Security Issuers" in the product supplement.

Initial Closing Price: The "**Initial Closing Price**" is the Closing Price on November 27, 2017 (the "**Initial Valuation Date**").

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

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

Final Closing Price: The "**Final Closing Price**" is the Closing Price on November 27, 2020 (the "**Final Valuation Date**").

Closing Price: The "**Closing Price**" on any date is the official closing price of the Underlying Securities quoted on www.spdrs.com for such date, as determined by the Calculation Agent (defined below). The official closing price of the Underlying Securities is available from other sources, such as Bloomberg; however, neither the Bank nor the Dealers make any representation as to the accuracy of such information and all calculations regarding the Closing Price will be made by the Calculation Agent.

Observation Dates: An "**Observation Date**" for the purposes of determining the amount of any Interest Payment will occur semi-annually on the dates specified below in each year that the Securities are outstanding, from and including May 29, 2018 to and including November 27, 2020. If any such Observation Date is not an Exchange Day (defined in the product supplement), it shall be postponed to the next succeeding Exchange Day.

Provided that the Securities are not redeemed by the Bank as described below, the Bank intends the Observation Dates to be:

May 29, 2018	November 27, 2018
May 28, 2019	November 27, 2019
May 27, 2020	November 27, 2020

Interest Payment Dates: The "**Interest Payment Date**" for an Interest Payment, if any, will occur semi-

	annually on the dates specified below in each year that the Securities are outstanding, from and including June 1, 2018 to and including December 2, 2020. Provided that the Securities are not redeemed by the Bank as described below, the Bank intends the Interest Payment Dates to be: June 1, 2018 November 30, 2018 May 31, 2019 December 2, 2019 June 1, 2020 December 2, 2020 The final Interest Payment, if any, will be made on the earlier of the Autocall Redemption Date (defined below) (if applicable) and the Maturity Date.
Interest Payments:	Interest payments (the "**Interest Payments**" and each, an "**Interest Payment**"), if any, on the Securities will be payable on each Interest Payment Date, in arrears, at a fixed interest rate of 4.00% semi-annually ending on an Interest Payment Date (an "**Interest Period**") for each Interest Period in which a Digital Payout Event occurs on the Observation Date occurring in the Interest Period. On the basis of the foregoing, the interest on each $100 Principal Amount of Securities for an Interest Period in which a Digital Payout Event has occurred would equal $100 × 4.00%. Thus, if a Digital Payout Event occurs: (a) on each Observation Date in any twelve-month period, the amount of interest payable on each $100 Principal Amount of Securities for that twelve-month period will be $8.00; and (b) on one out of the two Observation Dates in any twelve-month period, the amount of interest payable on each $100 Principal Amount of Securities for that twelve-month period will be $4.00. If a Digital Payout Event does not occur on the Observation Date during a particular Interest Period, no interest will be payable on the Securities for such Interest Period.
Digital Payout Event:	A "**Digital Payout Event**" will occur if, on the relevant Observation Date, the Closing Price is greater than or equal to the Coupon Barrier Price. RBC DS intends to publish whether there has been a Digital Payout Event on each Observation Date on its website at www.rbcnotes.com.
Autocall Redemption Event:	An "**Autocall Redemption Event**" will occur if the Closing Price on an Observation Date other than the last Observation Date is greater than or equal to the Initial Closing Price (the "**Autocall Redemption Price**"). On the next succeeding Interest Payment Date following the occurrence of an Autocall Redemption Event (the "**Autocall Redemption Date**") the Securities will be redeemed for an amount equal to the Principal Amount thereof (the "**Autocall Redemption Amount**"). In addition to the Autocall Redemption Amount, an Interest Payment will be paid on the Autocall Redemption Date.
Payment at Maturity:	On the Maturity Date, if the Securities have not been previously redeemed, the amount payable (the "**Final Redemption Amount**") for each $100 Principal Amount per Security will be equal to: (a) if the Final Closing Price is greater than or equal to the Protection Barrier Price, $100; or (b) if the Final Closing Price is less than the Protection Barrier Price, an amount equal to the Underlying Securities Return, but in any event not less than $1.00. As a result, the Final Redemption Amount will not be determinable before the Final Valuation Date. See "Risk Factors" below. In addition to the Final Redemption Amount, an Interest Payment will be paid on the Maturity Date if a Digital Payout Event occurs on the Final Valuation Date.
Underlying Securities Return:	"**Underlying Securities Return**" means $100 × ($X_f$ / X_i). where: "$\mathbf{X_f}$" means the Final Closing Price, and "$\mathbf{X_i}$" means the Initial Closing Price.

Sample Calculations:	See Appendix B to this pricing supplement for sample calculations of the Final Redemption Amount or Autocall Redemption Amount (in the event of an Autocall Redemption Event) and any Interest Payments payable on the Securities at or prior to (in the event of an Autocall Redemption Event) the Maturity Date.
Issuer Credit Rating:	Moody's: A1 Standard & Poor's: AA- DBRS: AA The Securities themselves have not been and will not be rated. See "Description of the Securities — Ratings" in the program supplement.
Extraordinary Events:	Determination of the Closing Price, including the Initial Closing Price and/or the Final Closing Price, and the Final Redemption Amount may be postponed, or the Bank can accelerate determination of the Final Closing Price and the Final Redemption Amount and repay the Securities in full prior to their maturity, in certain circumstances. If an Extraordinary Event occurs then the Calculation Agent may, but is not required to, make such adjustments to any payment or other term of the Securities as it determines to be appropriate, acting in good faith, to account for the economic effect of such event on the Securities and determine the effective date of any such adjustment. See "Description of the Securities — Special Circumstances" in the program supplement and "Description of the Equity, Unit and Debt Linked Securities — Extraordinary Events" in the product supplement.
Summary of Fees and Expenses:	A commission of 2.00% of the Principal Amount of Securities issued under this offering will be paid to the Dealers for further payment to representatives, including representatives employed by the Dealers, whose clients purchase the Securities. An agency fee will also be paid, from the Bank's own funds, to Raymond James Ltd. in an amount up to 0.15% of the Principal Amount of the Securities issued under this offering for acting as independent agent. The selling commissions and the agency fee are indirectly borne by holders of the Securities. There are no fees directly payable by a holder of Securities. See "Description of the Securities — Fees and Expenses" in the program supplement. An early trading charge may also apply. See "Secondary Market" below.
Fees Affecting Closing Price of Underlying Securities:	The Closing Price of the Underlying Securities will be net of the fees and expenses charged by or assumed by the Fund, which will therefore be indirectly assumed by holders of the Securities. Such fees and expenses include annual management fees payable by the Fund to its trustee and/or investment advisor and other operating expenses of the Fund. See the disclosure of the fees and expenses in the Fund's continuous disclosure materials (which are not incorporated by reference herein). For the year ended June 30, 2017, the management expense ratio, which includes the management fee payable by the Fund to SSGA Funds Management, Inc. (the "**Adviser**") and/or its affiliates for acting as trustee and/or manager of the Fund, represented an annual rate of 0.35% of the Fund's average daily net asset value during the year.
Eligibility for Investment:	Eligible for RRSPs, RRIFs, RESPs, RDSPs, DPSPs and TFSAs. See "Eligibility for Investment" in Appendix C, including the summary of the "prohibited investment" rule.
Risk Factors:	You should carefully consider all the information set out in this prospectus for any Securities in which you are considering investing. **In particular, you should evaluate the risks described under "Risk Factors" in each of the base shelf prospectus and the product supplement, as well as the risks described below.** The return on the Securities is unknown and subject to many variables, including interest rate fluctuations and changes in the price of the Underlying Securities. You should independently determine, with your own advisors, whether an investment in the Securities is suitable for you having regard to your own investment objectives and expectations.

Limited Upside Participation by the Securities

The return on the Securities is limited; even if the Closing Price is greater than the Coupon Barrier Price but less than the Autocall Redemption Price on each Observation Date and the Final Closing Price is greater than or equal to the Protection Barrier Price, the maximum return on the Securities would be equal to $24.00 per Security. The Securities will not participate in any upside performance of the Underlying Securities.

Lack of Diversification

The constituents in the Tracked Index are all primarily biotechnology companies and are therefore all concentrated in one industry sector. This means that the performance of the Securities will be tied entirely to the success of this one industry sector. Biotechnology companies are subject to risks that are specific to that industry sector and which may therefore result in the performance of the Securities being substantially different, and potentially substantially worse, than other industry sectors or the securities/equity markets generally.

Uncertain Return until Final Valuation Date

The return, if any, on the Securities will be uncertain until the Final Valuation Date, unless the Securities are called for redemption prior to the Final Valuation Date. Whether there is a return on the Securities will depend on the Closing Price on the Observation Dates and the Final Valuation Date. No Interest Payment will be made on an Interest Payment Date unless there is a Digital Payout Event on the immediately preceding Observation Date. There can be no assurance that the Securities will generate a positive return or that the objectives of the Securities will be achieved. Holders of the Securities may not be repaid the amount they invested in the Securities (other than $1.00 per Security), depending on the price performance of the Underlying Securities. Historical prices of the Underlying Securities should not be considered as an indication of the future price performance of the Underlying Securities. Investors should understand that the risk involved in this type of investment is greater than that normally associated with other types of investments.

Volatility May Affect the Return on or Trading Value of the Securities

Volatility is the term used to describe the size and frequency of price and/or market fluctuations. If the volatility, or anticipated volatility, of the Underlying Securities changes over the term of the Securities, the trading value of the Securities may be adversely affected. In addition, if the Closing Price on an Observation Date is less than the Coupon Barrier Price, you will not receive an Interest Payment on the relevant Interest Payment Date, and if the Final Closing Price is less than the Protection Barrier Price, the Final Redemption Amount will be reduced such that you will receive less than the Principal Amount on the Maturity Date. In periods of high volatility, the likelihood of an investor not receiving some or all of the Interest Payments or a return of the full Principal Amount of the Securities increases.

The Securities may be Redeemed prior to the Maturity Date

The Securities will be automatically redeemed by the Bank on the Autocall Redemption Date if the Closing Price on an Observation Date, other than the last Observation Date, is greater than or equal to the Autocall Redemption Level. In such event, investors will receive an Autocall Redemption Amount equal to the Principal Amount of the Securities. If the Securities are redeemed by the Bank, investors will not be entitled to receive any further interest that they may have been entitled to receive if the Securities had not been redeemed by the Bank.

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

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

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

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

Preparation of Initial Estimated Value:

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

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

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

Suitability for Investment:

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

- investors seeking an investment product with exposure to the Underlying

Securities

- investors who believe that the Closing Price will be equal to or above the Coupon Barrier Price on each Observation Date
- investors who believe that the Final Closing Price will not be below the Protection Barrier Price
- investors who are willing and can afford to risk substantially all of the principal amount of their investment
- investors looking for the potential to earn a return linked to the price performance of the Underlying Securities and who are prepared to assume the risks associated with an investment linked to the price performance of the Underlying Securities
- investors with an investment horizon equal to the term to maturity of the Securities who are prepared to hold the Securities until maturity, but who are willing to assume the risk that the Securities will be redeemed prior to the Maturity Date if the Closing Price is equal to or exceeds the Autocall Redemption Price on an Observation Date
- investors who are prepared to take the risk that regular Interest Payments will not be made on the Securities
- investors who understand that the potential return on the Securities is limited; the maximum return on the Securities is equal to $24.00 per Security

Book-entry Only Securities: The Securities will be issued through the "book-entry-only system" and must be purchased, transferred or redeemed through RBC DS or using the FundSERV network (see "Transfers of Securities" below). On the Issue Date, the Securities will be registered in the name of RBC DS or its nominee, as the case may be, which will hold such Securities as depository on behalf of the registered dealers through whom the Securities are purchased (i.e., the members of RBC DS' distribution network that participate in the offering as "selling firms" and not as dealers under the base shelf prospectus). RBC DS or one of its affiliates will maintain a record of all of the beneficial owners of the Securities.

Except as described below, a purchaser acquiring a beneficial interest in the Securities will not be entitled to a certificate or other instrument from the Bank, any trustee or the depository evidencing that purchaser's interest therein, and such purchaser will not be shown as the registered holder of the Securities on the records maintained by the depository. Each such purchaser of Securities will receive a customer confirmation of purchase from the registered dealer through whom the Securities are purchased in accordance with the practices and procedures of that registered dealer.

As long as the Securities are held in the book-entry-only system maintained by RBC DS, the Bank will recognize only RBC DS as the holder of the Securities and the Bank will make all payments on the Securities to RBC DS. RBC DS will in turn make payments to beneficial owners, by distributing such payments through the FundSERV network. The Bank understands that RBC DS does so under agreements it has made with the registered dealers through whom the Securities are purchased; RBC DS is not obligated to do so under the terms of the Securities.

Under this arrangement and pursuant to the *Securities Transfer Act, 2006* (Ontario) (the "**STA**"), investors will not own the Securities directly. Instead, they will own beneficial interests in the Securities, through RBC DS and, if applicable, any other registered dealer through whom the Securities are purchased. As long as the Securities are held in the book-entry-only system, investors will be indirect owners, and not registered holders, of Securities. Under the STA, RBC DS has the rights and obligations of a securities intermediary *vis-á-vis* any investors who purchase their beneficial interests from RBC DS. As such, the Securities are held for the benefit of investors, are not the property of RBC DS and are not subject to the claims of creditors of RBC DS.

Neither the Bank nor the Dealers (other than RBC DS) will assume any liability for: (a) any aspect of the records relating to the beneficial ownership of the Securities held by a depository or the payments or deliveries relating thereto; (b) maintaining, supervising or reviewing any records relating to the Securities; or (c) any advice or representation made by or with respect to a depository, including those contained in this prospectus, relating to the rules governing the depository or any action to be taken by the depository or at the direction of the selling firms. The depository acts as the agent and depository for the selling firms, who in turn are agents for the beneficial owners. As a result, for payment or deliveries made by or on behalf of the Bank to the depository in respect of the Securities, the beneficial owners of the Securities must look solely to the selling firms, who in turn will look to the depository for such payment or deliveries.

As indirect holders of Securities, investors should be aware that, except in the circumstances described below, they: (a) may not have Securities registered in their name; (b) may not have physical certificates representing their interest in the Securities; (c) may not be able to sell the Securities to institutions required by law to hold physical certificates for securities they own; and (d) may be unable to pledge Securities as security.

Securities in fully registered and certificated form will be issued to beneficial owners of Securities only if: (i) required by applicable law; (ii) RBC DS' book-entry-only system ceases to exist; (iii) the Bank or RBC DS advises that RBC DS is no longer willing or able to properly discharge its responsibilities as depository with respect to the Securities and the Bank is unable to locate a qualified successor; (iv) the Bank, at its option, decides to terminate its present arrangements with RBC DS; (v) if an event of default has occurred with regard to the Securities and has not been cured or waived; or (vi) as otherwise agreed by the Bank and RBC DS.

If the Securities are issued in fully registered and certificated form in the circumstances described above, the Final Redemption Amount due at maturity or the Autocall Redemption Amount (in the event of an Autocall Redemption Event) will be paid upon surrender thereof at any branch of the Bank in Canada.

Transfers of Securities

Transfers of ownership of the Securities will be effected only through records maintained by RBC DS or one of its affiliates, as the case may be, with respect to interests of the beneficial owners. If you hold Securities and desire to purchase, sell or otherwise transfer ownership of or other interests in Securities, you may do so only through RBC DS or by using the FundSERV network.

Your ability to pledge Securities or otherwise take action with respect to your interest in Securities (other than through RBC DS or by using the FundSERV network) may be limited due to the lack of a physical certificate.

Global Securities

The Securities will be issued as book-entry only securities in fully registered form and will be represented by a global security (the "**Global Security**") that the Bank will deposit with and register in the name of RBC DS, or its nominee, as depository. The Global Security may also be held by the Bank in its capacity as domestic custodian for the depository. Except in the circumstances described above, owners of beneficial interests in book-entry securities will not be entitled to physical delivery of securities in certificated form. The Bank will make payments of all amounts payable on the Securities to the depository. The Global Security may not be transferred to the name of a beneficial owner except in the special circumstances described above.

See "Description of the Securities – Legal Ownership" in the program supplement.

Listing: The Securities will not be listed on any stock exchange. See "Risk Factors" in the product supplement.

Secondary Market: Securities may be purchased through dealers and other firms that facilitate purchase and related settlement using the FundSERV network. Securities may be resold using the FundSERV network at a sale price equal to the price posted on FundSERV as of the close of business on the Exchange Day on which the order is placed, as determined by and posted to FundSERV by the Calculation Agent, which sale price may be lower than the Principal Amount of such Securities, less an early trading charge as specified below. See "Risk Factors – The Initial Estimated Value of the Securities Is Less than the Price to the Public and May not Reflect the Secondary Market Price, if any, of the Securities" above.

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

If a Security is sold within the first 90 days from the Issue Date, the proceeds from the sale of the Securities will be reduced by an early trading charge ("**Early Trading Charge**") equal to a percentage of the Principal Amount determined as set out below.

If Sold Within the Following No. of Days from Issue Date	Early Trading Charge (% of Principal Amount)
1 - 30 days	2.50%
31 - 60 days	2.00%
61 - 90 days	1.00%
Thereafter	Nil

Fiscal Agent: RBC DS. See "Description of the Securities – Fiscal Agency and Calculation Agency Agreement" in the program supplement.

Calculation Agent: RBC DS. See "Description of the Securities – Calculation Agent" in the program supplement and "Risk Factors" in the product supplement.

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

APPENDIX A

Summary Information Regarding the Fund

Fund	SPDR® S&P Biotech ETF
Tracked Index	S&P® Biotechnology Select Industry™ Index
Adviser	SSGA Funds Management, Inc.
Country	United States
Current Exchange	NYSE Arca
Closing Price of Underlying Securities (November 1, 2017)	US$82.47

We have derived all information contained in this pricing supplement regarding the Fund from publicly available information. We make no representations or warranty as to the accuracy or completeness of the information derived from these public sources. Such information reflects the policies of, and is subject to change by the Adviser. The Fund is an exchange-traded fund managed by the Adviser and established as a trust under the laws of the United States whose units trade on the NYSE Arca under the ticker symbol "XBI". The Adviser is a registered investment company that is the investment adviser of numerous separate exchange-traded funds, including the Fund. Information provided to or filed with the securities regulators by the Adviser pursuant to securities legislation can be located at www.sec.gov/edgar.shtml. In addition, information about the Adviser and the Fund may be obtained from other sources including, but not limited to, press releases, newspaper articles and other publicly disseminated documents and the Adviser's website at www.spdrs.com. We make no representation or warranty as to the accuracy or completeness of such information.

Investment Objective and Strategy

The Fund seeks to provide investment results that, before fees and expenses, correspond generally to the total return performance of an index derived from the biotechnology segment of the U.S. total market composite index. In seeking to track the performance of the Tracked Index, the Fund employs a sampling strategy, which means that the Fund is not required to purchase all of the securities represented in the Tracked Index. Instead, the Fund may purchase a subset of the securities in the Tracked Index in an effort to hold a portfolio of securities with generally the same risk and return characteristics of the Tracked Index. The quantity of holdings in the Fund will be based on a number of factors, including asset size of the Fund. Based on its analysis of these factors, the Adviser may invest the Fund's assets in a subset of securities in the Tracked Index or may invest the Fund's assets in substantially all of the securities represented in the Tracked Index in approximately the same proportions as the Tracked Index. Under normal market conditions, the Fund generally invests substantially all, but at least 80%, of its total assets in the securities comprising the Tracked Index.

S&P® Biotechnology Select Industry™ Index Constituents

The Tracked Index is composed of constituents of the S&P® Biotechnology Select Industry™ Index. The companies whose securities are included in the Tracked Index as of November 1, 2017 are as follows:

Company Name			
Ignyta Inc	Foundation Medicine Inc	Five Prime Therapeutics Inc	OPKO Health Inc
Dynavax Technologies Corp	Cara Therapeutics Inc	Exact Sciences Corp	TESARO Inc
Cytokinetics Inc	Synergy Pharmaceuticals Inc	Regeneron Pharmaceuticals Inc	Neurocrine Biosciences Inc
United Therapeutics Corp	Repligen Corp	Achaogen Inc	ImmunoGen Inc
Akebia Therapeutics Inc	Intercept Pharmaceuticals Inc	PDL BioPharma Inc	AMAG Pharmaceuticals Inc
Puma Biotechnology Inc	Global Blood Therapeutics Inc	Celgene Corp	MacroGenics Inc
Xencor Inc	Portola Pharmaceuticals Inc	Sangamo Therapeutics Inc	Myriad Genetics Inc
Alexion Pharmaceuticals Inc	Epizyme Inc	Keryx Biopharmaceuticals Inc	Achillion Pharmaceuticals Inc
Juno Therapeutics Inc	ACADIA Pharmaceuticals Inc	Coherus Biosciences Inc	Immunomedics Inc
Inovio Pharmaceuticals Inc	Exelixis Inc	Ironwood Pharmaceuticals Inc	Intrexon Corp
BioMarin Pharmaceutical Inc	Lexicon Pharmaceuticals Inc		Versartis Inc
Heron Therapeutics Inc	Spectrum Pharmaceuticals Inc		BioCryst Pharmaceuticals
Geron Corp			

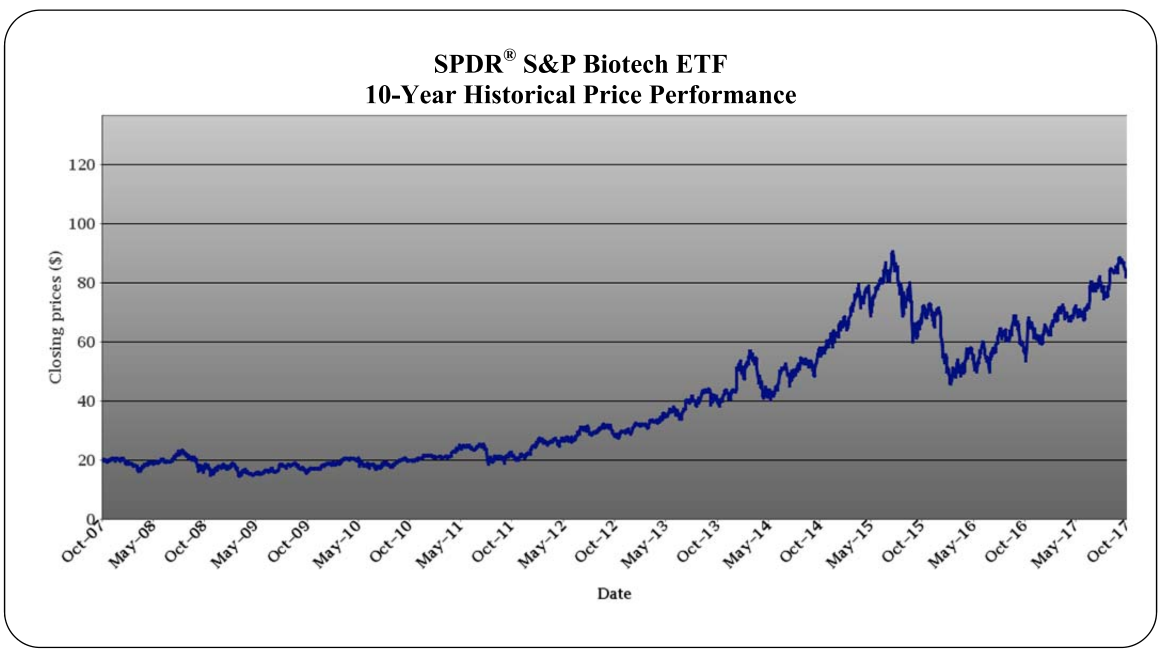
Retrophin Inc	Calithera Biosciences Inc	Emergent BioSolutions Inc	Inc
Loxo Oncology Inc	Arena Pharmaceuticals Inc	Sarepta Therapeutics Inc	Bioverativ Inc
Radius Health Inc	Avexis Inc	Ligand Pharmaceuticals Inc	Ionis Pharmaceuticals Inc
CytomX Therapeutics Inc	Vanda Pharmaceuticals Inc	Aimmune Therapeutics Inc	Genomic Health Inc
MiMedx Group Inc	Amgen Inc	Bluebird Bio Inc	Sage Therapeutics Inc
Flexion Therapeutics Inc	Spark Therapeutics Inc	Seattle Genetics Inc	Aduro Biotech Inc
Eagle Pharmaceuticals Inc/DE	Progenics Pharmaceuticals Inc	Enanta Pharmaceuticals Inc	Blueprint Medicines Corp
Array BioPharma Inc	REGENXBIO Inc	TG Therapeutics Inc	Acceleron Pharma Inc
Agios Pharmaceuticals Inc	Alder Biopharmaceuticals Inc	FibroGen Inc	Momenta Pharmaceuticals Inc
PTC Therapeutics Inc	Prothena Corp PLC	Gilead Sciences Inc	Acorda Therapeutics Inc
Incyte Corp	Editas Medicine Inc	Biogen Inc	Insmed Inc
Alnylam Pharmaceuticals Inc	AbbVie Inc	ZIOPHARM Oncology Inc	Amicus Therapeutics Inc
	La Jolla Pharmaceutical Co	Vertex Pharmaceuticals Inc	Halozyme Therapeutics Inc
		Alkermes PLC	Ultragenyx Pharmaceutical Inc
		Clovis Oncology Inc	Esperion Therapeutics Inc

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

Further information about the Tracked Index and its constituent issuers is available from Standard & Poor's on its website at www.us.spindices.com and information from this website is not incorporated by reference into this pricing supplement.

Historical Price Performance

The following chart sets forth the historical price performance of the units of the SPDR® S&P Biotech ETF for the period from October 31, 2007 to October 31, 2017. Historical price performance does not take into account distributions or dividends paid on the Underlying Securities.



All amounts in graph in US$.

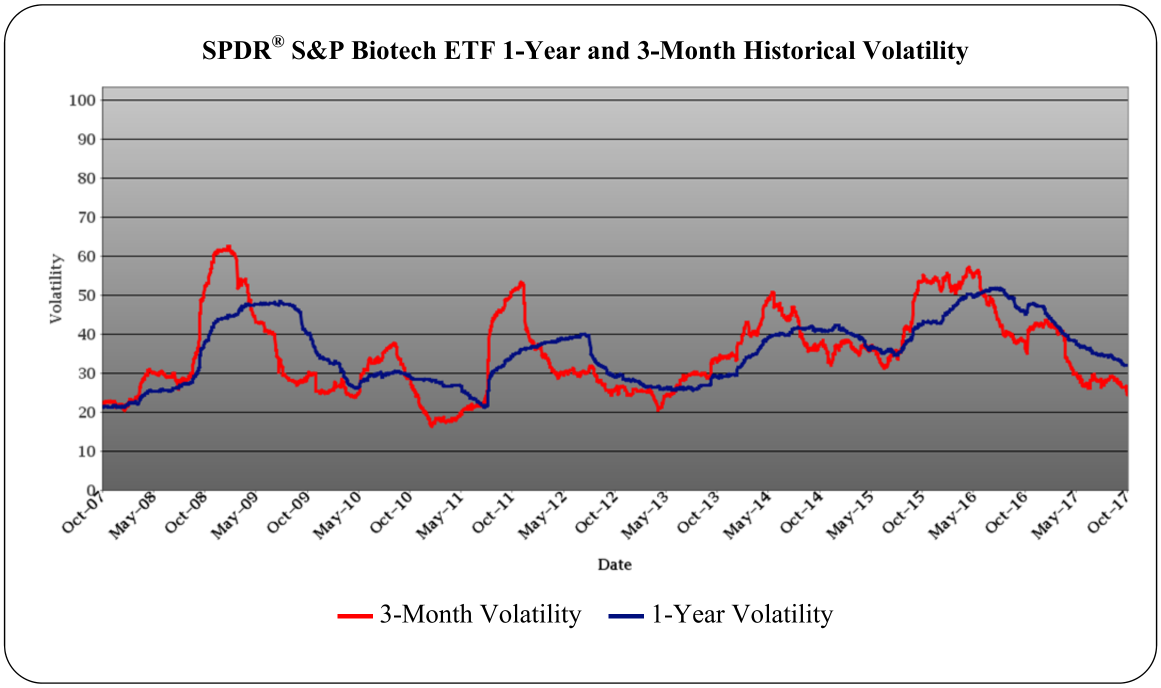
Historical price performance of the units of the SPDR® S&P Biotech ETF will not necessarily predict future price performance of the units of the SPDR® S&P Biotech ETF or the Securities. The source of the data displayed in this chart is Bloomberg L.P. and its accuracy cannot be guaranteed.

Historical annual percentage change of units of SPDR® S&P Biotech ETF										
Year	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Percentage change (%)	28.65	-9.50	-0.15	17.60	5.26	32.39	48.11	43.35	12.64	-15.54

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

The following chart sets forth the one-year and three-month historical volatility of the units of the SPDR® S&P Biotech ETF for the period from October 31, 2007 to October 31, 2017.

Historical volatility is not a guarantee of future volatility.



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

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

Trademarks

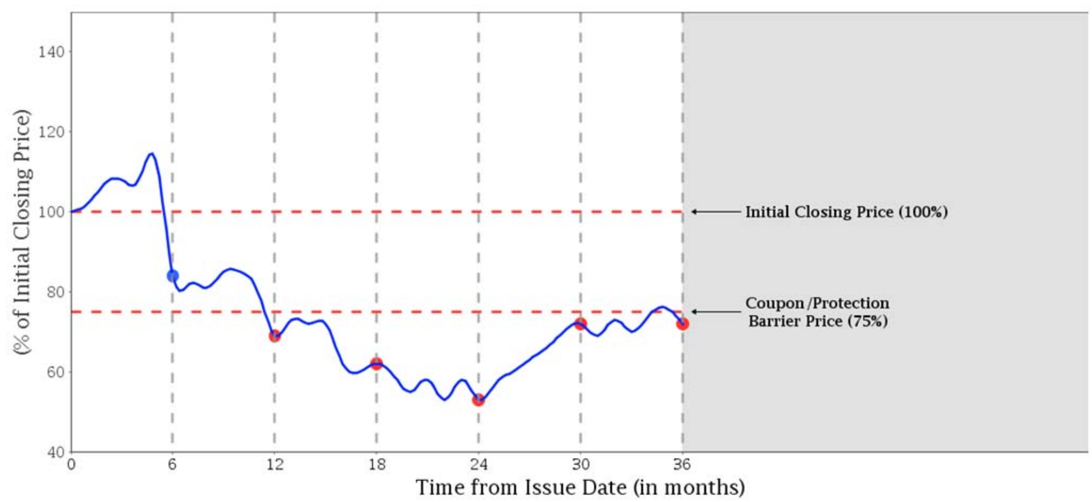
Lion & Globe symbol is a trademark of Royal Bank of Canada and Standard & Poor's®, S&P® and SPDR® are registered trademarks of Standard & Poor's Financial Services LLC ("**S&P**"); Biotechnology Select Industry™ is a product of S&P Dow Jones Indices LLC ("**SPDJI**"); Dow Jones® is a registered trademark of Dow Jones Trademark Holdings LLC ("**Dow Jones**"); and these trademarks have been licensed for use by SPDJI and sublicensed for certain purposes by State Street Corporation. State Street Corporation's and the Bank's products are not sponsored, endorsed, sold or promoted by SPDJI, Dow Jones, S&P, their respective affiliates, and none of such parties make any representation regarding the advisability of investing in such product(s) nor do they have any liability for any errors, omissions, or interruptions of the Tracked Index.

APPENDIX B

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

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

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



- Indicates Observation Dates on which the Coupon Barrier Price is breached; therefore no Interest Payment will occur on the related Interest Payment Date.
- Indicates Observation Dates on which there is a Digital Payout Event; therefore an Interest Payment will occur on the related Interest Payment Date.
- SPDR® S&P Biotech ETF

In this scenario, there is no Observation Date on which the Closing Price is at or above the Autocall Redemption Price and, accordingly, the Securities would not be redeemed before the Maturity Date. On the Final Valuation Date, the Final Closing Price is below the Protection Barrier Price.

(i) Interest Payments

In this example, there is a Digital Payout Event on 1 of the 6 Observation Dates. On the other 5 Observation Dates, no Digital Payout Event would occur because the Closing Price is below the Coupon Barrier Price. Therefore, the Interest Payment of $4.00 per Interest Period would be payable for 1 Interest Period on the applicable Interest Payment Date, for total Interest Payments of:

$$\text{Principal Amount of Securities} \times 4.00\% \text{ per Interest Period} \times 1 \text{ Interest Period}$$

$$\$100 \times 4.00\% \times 1 = \$4.00$$

(ii) Final Redemption Amount

In this example, the Initial Closing Price (X_i) is US$82.47 and the Final Closing Price (X_f) is US$59.38. Therefore, the Final Redemption Amount is as follows:

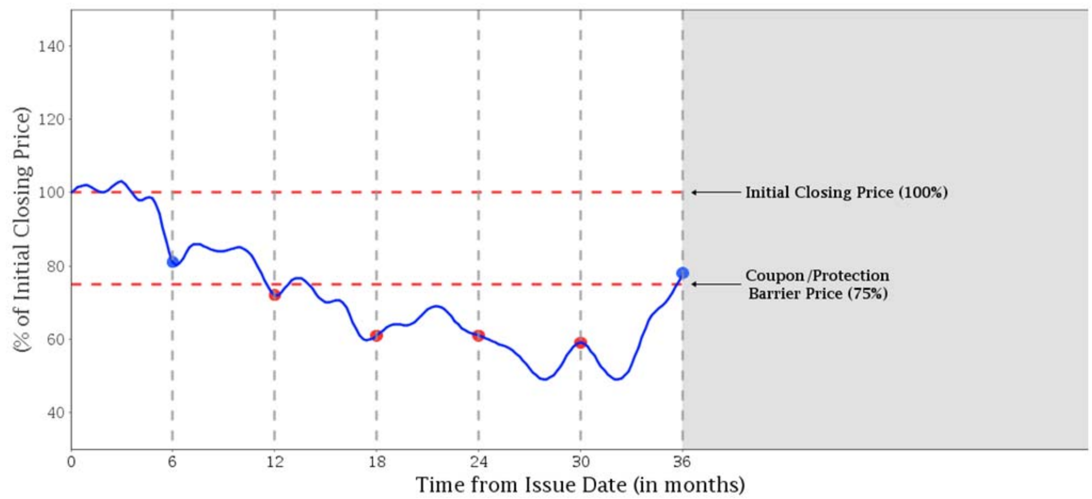
$$\$100 \times (X_f / X_i)$$

$$\$100 \times (\text{US\$}59.38 / \text{US\$}82.47) = \$72.00$$

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

(a) Total Interest Payments: $4.00
(b) Final Redemption Amount: $72.00
(c) Total amount paid over the term of the Securities: $76.00
The equivalent annually compounded rate of return in this example is -8.74%.

Example #2 — Gain Scenario with Payment on the Maturity Date at Par



- Indicates Observation Dates on which the Coupon Barrier Price is breached; therefore no Interest Payment will occur on the related Interest Payment Date.
- Indicates Observation Dates on which there is a Digital Payout Event; therefore an Interest Payment will occur on the related Interest Payment Date.
- SPDR® S&P Biotech ETF

In this scenario, there is no Observation Date on which the Closing Price is at or above the Autocall Redemption Price and, accordingly, the Securities would not be redeemed before the Maturity Date. On the Final Valuation Date, the Final Closing Price is at or above the Protection Barrier Price.

(i) Interest Payments

In this example, there is a Digital Payout Event on 2 of the 6 Observation Dates. On the other 4 Observation Dates, no Digital Payout Event would occur because the Closing Price is below the Coupon Barrier Price. Therefore, the Interest Payment of $4.00 per Interest Period would be payable for 2 Interest Periods on the applicable Interest Payment Date for total Interest Payments of:

Principal Amount of Securities × 4.00% per Interest Period × 2 Interest Periods

$100 × 4.00% × 2 = $8.00

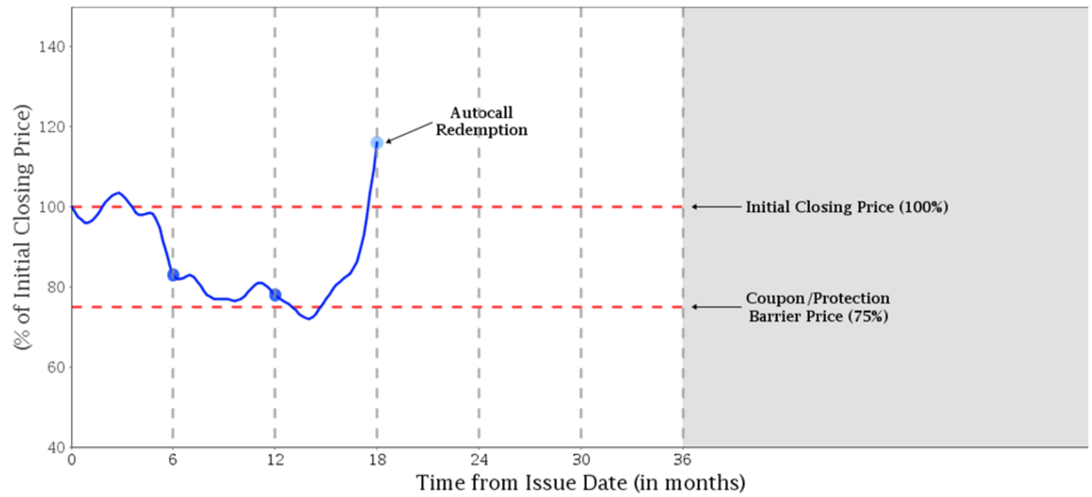
(ii) Final Redemption Amount

In this example, since the Final Closing Price is US$64.33, which is above its Protection Barrier Price of 75.00% of the Initial Closing Price of US$82.47, the Final Redemption Amount per Security is equal to $100.00.

Therefore, the total amounts payable per Security from the Issue Date to the Maturity Date are:
(a) Total Interest Payments: $8.00
(b) Final Redemption Amount: $100.00
(c) Total amount paid over the term of the Securities: $108.00

The equivalent annually compounded rate of return in this example is 2.60%.

Example #3 — Gain Scenario with Autocall Redemption at Par



- Indicates Observation Date on which the Autocall Redemption Price is exceeded.
- Indicates Observation Dates on which there is a Digital Payout Event; therefore an Interest Payment will occur on the related Interest Payment Date.
- SPDR® S&P Biotech ETF

In this scenario, the Closing Price is at or above the Autocall Redemption Price on the Observation Date that falls 18 months into the term of the Securities. This would constitute an Autocall Redemption Event and, on the next succeeding Interest Payment Date, the Bank would redeem the Securities.

(i) Interest Payments

In this example, there is a Digital Payout Event on each of the 3 Observation Dates prior to the redemption of the Securities because the Closing Price is at or above the Coupon Barrier Price on each such date. Therefore, the Interest Payment of $4.00 per Interest Period would be payable for each Interest Period on the applicable Interest Payment Date (including on the Autocall Redemption Date), for total Interest Payments of:

Principal Amount of Securities × 4.00% per Interest Period × 3 Interest Periods

$100 × 4.00% × 3 = $12.00

(ii) Autocall Redemption Amount

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

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

(a) Total Interest Payments: $12.00

(b) Autocall Redemption Amount: $100.00

(c) Total amount paid over the term of the Securities: $112.00

The equivalent annually compounded rate of return in this example is 7.85%.

APPENDIX C

Certain Canadian Tax Considerations

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

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

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

Holders Resident in Canada

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

Interest

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

Disposition of Securities

On a disposition or deemed disposition of a Security by a Holder to a person (other than the Bank), the amount of any interest accrued on the Security to the time of disposition will be required to be included in computing the Holder's income for the taxation year in which the disposition takes place and will be excluded from the proceeds of disposition of the Security, except to the extent that such accrued interest has already been included in the Holder's income for that or a preceding taxation year. Because the interest entitlement of a Holder for a particular Interest Period will generally only be determinable on the Observation Date for that period, whether accrued interest will be payable on a Security at the time of disposition may, in some circumstances, be considered uncertain.

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

Redemption or Repayment by the Bank

A Resident Holder who holds the Securities until maturity (or earlier redemption or repayment in full by the Bank) and who receives redemption or repayment proceeds less than the Principal Amount of the Securities will realize a capital loss to the extent that the amount received at such time (otherwise than on account of interest) is less than the Resident Holder's adjusted cost base of such Securities. The income tax considerations associated with the realization of a capital loss are described above.

Holders Not Resident in Canada

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

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

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

Eligibility for Investment

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

Notwithstanding the foregoing, if the Securities are "prohibited investments" (as that term is defined in the Tax Act) for a TFSA, an RRSP or a RRIF, a holder of the TFSA, or an annuitant of the RRSP or the RRIF, as the case may be, (each a "**Plan Holder**") will be subject to a penalty tax as set out in the Tax Act. Legislative Proposals that were initially announced on March 22, 2017 would extend these rules to impose the penalty tax on the holder of an RDSP, or the subscriber of an RESP, that acquires prohibited investments after that date. Securities will be "prohibited investments" (as that term is defined in the Tax Act) to a TFSA, an RRSP or a RRIF of a Plan Holder (and, under such Proposals, to the holder of an RDSP, or a subscriber of an RESP) who has a "significant interest" (as defined in the Tax Act for purposes of the prohibited investment rules) in the Bank or who does not deal at arm's length, within the meaning of the Tax Act, with the Bank. Investors should consult their own tax advisors in this regard.