



Royal Bank of Canada

Royal Bank of Canada
200 Bay Street
Toronto ON M5J 2J5

Switchboard: 416 842 6095
Facsimile: 416 842 6099

Final Term Sheet

Dated June 7, 2017

RBC SPDR S&P Oil & Gas Exploration and Production Autocallable Securities, Series 1P (CAD), due June 23, 2022

Unless otherwise indicated, references to "\$" are to Canadian dollars.

PRODUCT

DATES

Issuer:	Royal Bank of Canada (the "Bank")	Term:	Approximately 5 years, subject to an Autocall Redemption Event quarterly, commencing at the end of the second year
Issue:	RBC SPDR S&P Oil & Gas Exploration and Production Autocallable Securities, Series 1P (CAD), due June 23, 2022 (the "Securities")	Trade Date:	May 25, 2017
Bank Credit Rating:	Moody's: A1 Standard & Poor's: AA- DBRS: AA	Initial Valuation Date:	May 25, 2017
ISIN:	CA 78013A4211	Issue Date:	June 23, 2017
Principal Amount:	\$100 per Security	Final Valuation Date:	May 25, 2022
Denomination:	\$100 per Security	Observation Type at Maturity:	European Monitoring (Single Observation on the Final Valuation Date)
Underlying Securities:	SPDR S&P Oil & Gas Exploration & Production ETF	Maturity Date:	June 23, 2022
Issue Price:	\$100 per Security	Delivery:	Cash
Issue Amount:	\$20,000,000	RBC Code:	LIONS-XOPCY1P

Underlying Securities Information

Underlying Securities	Identifiers	Initial Strike Price	Protection Barrier Price	Coupon Barrier Price	Autocall Redemption Price
SPDR S&P Oil & Gas Exploration & Production ETF	Bloomberg ticker: XOP UP Equity	35.0363	(Initial Strike Price × 70%) 24.5254	(Initial Strike Price × 70%) 24.5254	(Initial Strike Price × 100%) 35.0363

Issue Price: The Securities will be issued at a price equal to their Principal Amount (defined below).

Denomination: Securities are issuable in denominations of \$100 (the "Principal Amount") and in minimum increments of \$100.

Minimum Investment: 50 Securities or \$5,000.

Objective of the Securities: The Securities have been designed for investors looking to earn a return linked to the price performance of the Underlying Securities and who are prepared to assume the risks associated with such an investment.

Principal at Risk Securities: All but 1.00% of the Principal Amount of the Securities is fully exposed. You could lose substantially all of your investment.



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Status:	The Securities will be the Bank's direct, unsecured and unsubordinated debt obligations.
Bank Credit Rating:	The Securities have not been and will not be rated. You should consult the relevant rating organization with respect to the interpretation and implications of any rating of the Bank. Any such rating should not be construed as a recommendation to buy, sell or hold the Securities. Ratings may be revised or withdrawn at any time by the respective rating organizations.
Underlying Securities:	<p>The return on the Securities is linked to the price performance of the units (the "Underlying Securities" and each, an "Underlying Security") of the SPDR S&P Oil & Gas Exploration & Production ETF (the "Fund").</p> <p>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 Oil & Gas Exploration & Production Select Industry Index (the "Tracked Index") and registered holders of the Securities (the "Securityholders") will have no right or entitlement to the Underlying Securities, the Fund or in the securities comprising the Tracked Index, including the dividends or other distributions paid thereon. There is no requirement for the Bank to hold any interest in the Underlying Securities or in the securities comprising the Tracked Index.</p> <p>This term sheet has been prepared for the sole purpose of assisting prospective investors in making an investment decision with respect to the Securities. This term sheet relates only to the Securities offered hereby and does not relate to the Underlying Securities, the Fund and/or the Tracked Index. The Bank has not verified the accuracy or completeness of any information pertaining to the Fund or the Tracked Index or determined if there has been any omission by the manager of the Fund or the 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 the manager of the Fund or the Tracked Index Sponsor which may affect the significance or accuracy of such information. The Bank does not make any representation that such publicly available documents or any other publicly available information regarding the Fund, the Tracked Index, the manager of the Fund and 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 have participated in the preparation of this term sheet and the Securities are not in any way sponsored, endorsed, sold or promoted by the manager of the Fund or the Tracked Index Sponsor.</p>
Issue Date:	The " Issue Date " is June 23, 2017.
Maturity Date:	The " Maturity Date " is June 23, 2022 (approximately a five-year term, subject to the occurrence of an Autocall Redemption Event).
Initial Strike Price:	The " Initial Strike Price " is the strike price of the Underlying Securities on May 25, 2017 (the " Initial Valuation Date "), being 35.0363.
Protection Barrier Price:	The " Protection Barrier Price " is 70% of the Initial Strike Price.
Coupon Barrier Price:	The " Coupon Barrier Price " is 70% of the Initial Strike Price.
Final Closing Price:	The " Final Closing Price " is the Closing Price of the Underlying Securities on May 25, 2022 (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 on such date, as determined by the Calculation Agent. The official closing price of the Underlying Securities is available from other sources, such as Bloomberg; however, the Bank does not make any representation as to the accuracy of such information and all calculations regarding the Closing Price of the Underlying Securities will be made by the Calculation Agent.
Observation Dates:	An " Observation Date " for the purposes of determining whether a Digital Payout Event or Autocall Redemption Event has occurred will occur every three months on the date specified below in each year that the Securities are outstanding, from and including May 28, 2019 to and including the Final Valuation Date.



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If any such Observation Date is not an Exchange Day, 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 28, 2019	August 26, 2019	November 25, 2019	February 25, 2020
May 26, 2020	August 25, 2020	November 25, 2020	February 25, 2021
May 25, 2021	August 25, 2021	November 26, 2021	February 25, 2022
May 25, 2022			

Interest Payment Dates:

The "**Interest Payment Date**" for the payment of any interest will occur every three months on the date specified below in each year that the Securities are outstanding, from and including September 25, 2017 to and including the Maturity Date. If any such Interest Payment Date is not a Business Day, it shall be postponed to the next succeeding Business Day.

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

September 25, 2017	December 27, 2017	March 23, 2018	June 25, 2018
September 24, 2018	December 24, 2018	March 25, 2019	June 24, 2019
September 23, 2019	December 23, 2019	March 23, 2020	June 23, 2020
September 23, 2020	December 23, 2020	March 23, 2021	June 23, 2021
September 23, 2021	December 23, 2021	March 23, 2022	June 23, 2022

Interest Payments:

Interest on the Securities will be payable on each Interest Payment Date until the seventh Interest Period of the Securities, in arrears, at a fixed interest rate of 1.2625%, thereafter, Interest, if any, on the Securities will be payable on each Interest Payment Date, in arrears, at a fixed interest rate of 1.2625% every three-months (an "**Interest Period**") for each Interest Period in which a Digital Payout Event occurs on the relevant Observation Date. On the basis of the foregoing, the interest on each \$100 Principal Amount of Securities until the seventh Interest Period and thereafter, for an Interest Period in which a Digital Payout Event has occurred, will equal $100 \times 1.2625\%$.

Digital Payout Event:

A "**Digital Payout Event**" will occur if, on the relevant Observation Date, the Closing Price of the Underlying Securities is greater than or equal to the Coupon Barrier Price.

Autocall Redemption Event Prior to Maturity:

An "**Autocall Redemption Event**" will occur if the Closing Price of the Underlying Securities on an Observation Date other than the last Observation Date is equal to or greater than the Initial Strike Price of the Underlying Securities (the "**Autocall Redemption Price**"). On the next succeeding Autocall 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**").

Autocall Payment Dates:

The "**Autocall Payment Date**" will occur quarterly on the date specified below in each year that the Securities are outstanding, from and including June 24, 2019 to and including the Maturity Date. If any such Autocall Payment Date is not a Business Day, it shall be postponed to the next succeeding Business Day.

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

June 24, 2019	September 23, 2019	December 23, 2019	March 23, 2020
June 23, 2020	September 23, 2020	December 23, 2020	March 23, 2021
June 23, 2021	September 23, 2021	December 23, 2021	March 23, 2022
June 23, 2022			



**Payment
at Maturity:**

On the Maturity Date, if the Securities have not been previously redeemed, you will receive in respect of each Security, in addition to any interest payment that is due, a cash payment (the "**Final Redemption Amount**") equal to:

- (a) if the Final Closing Price of the Underlying Securities is equal to or greater than the Protection Barrier Price, \$100; or
- (b) if the Final Closing Price of the Underlying Securities is less than the Protection Barrier Price, an amount equal to $\$100 \times (X_f / X_i)$, but in any event not less than \$1.00,

where,

" X_f " means the Final Closing Price of the Underlying Securities, and

" X_i " means the Initial Strike Price of the Underlying Securities.

As a result, the Final Redemption Amount will not be determinable before the Final Valuation Date. See "Risk Factors" below.

Extraordinary Events:

Determination of the Closing Price of the Underlying Securities, including the Final Closing Price, and the Final Redemption Amount, may be postponed, or the Bank can accelerate determination of the Final Closing Price or 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.

Costs and Fees:

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.

Risk Factors:

The return on the Securities is unknown and subject to many variables, including interest rate fluctuations and changes in the prices 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.

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 of the Underlying Securities on the relevant Observation Dates and the Final Valuation Date. No interest payments will be made on an Interest Payment Date, after the seventh Interest Period of the Securities, if the Closing Price of the Underlying Securities is below the Coupon Barrier Price. 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, holders of the Securities may not be repaid the amount they invested in the Securities (other than \$1.00 per Security). Historical prices of the Underlying Securities should not be considered as an indication of the future 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 and Currency Fluctuations 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 during the term of the Securities, the trading value of the Securities may be adversely affected. In addition, if volatility results in the Closing Price of the Underlying Securities being less than the Coupon Barrier Price on the relevant Observation Date, you will not receive an interest payment in respect of the relevant Interest Period. In periods of high volatility, the likelihood of an investor not receiving interest payments or a return of the full Principal Amount of the Securities increases.

In addition, if the Underlying Securities are denominated in a currency other than Canadian dollars, the performance and trading value of the Securities may be affected by currency fluctuations.

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 of the Underlying Securities on an Observation Date, other than the last Observation Date, is equal to or greater than the Autocall Redemption Price. In such event, investors will receive an amount in respect of



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each Security equal to the Autocall Redemption Amount. If the Securities are redeemed by the Bank, investors will not be entitled to receive any further interest that they would have been entitled to receive if the Securities had not been redeemed by the Bank.

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 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 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 of the Underlying Securities are equal to or exceeds the Autocall Redemption Price on any Observation Date; and
- investors who are prepared to take the risk that regular interest payments, after the seventh Interest Period of the Securities, will not be made on the Securities.

Tax:

All holders of Securities should consult their own tax advisors with respect to their tax positions and the tax consequences of holding the Securities.

Business Day Convention:

Following

Day Count:

30/360 Unadjusted

Settlement:

Clearing and Depository Services Inc. ("CDS")

Governing Law:

Province of Ontario and the laws of Canada applicable therein.

Secondary Market:

The Securities will trade over-the-counter. The sale price may be lower than the Principal Amount of such Securities, less an early trading charge (the "**Early Trading Charge**") equal to a percentage of the Principal Amount determined as set out below.

If Sold Within the Following <u>No. of Days from Issue Date</u>	Early Trading Charge <u>(% of Principal Amount)</u>
1-60 days	2.50%
61-120 days	2.25%
121-180 days	2.00%
181-240 days	1.75%
241-300 days	1.50%
301-360 days	1.00%
Thereafter	Nil

Canadian Offering Information

Canadian Offering Information:

The Securities may not be offered, sold or distributed, directly or indirectly, in Canada or to or for the benefit of, any resident in Canada except under an exemption under applicable securities law.



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Book-entry System:	<p>The Securities will be represented in the form of a fully registered, book-entry only global security (the "Global Security") to be held by or on behalf of CDS in Toronto, Canada as custodian of the Global Security, and registered in the name of CDS in Toronto, Canada or its nominee, initially CDS & CO.</p> <p>Holders of Securities will have an indirect beneficial interest in the Global Security. The Bank will, directly or indirectly through its CDS participant, hold all of the beneficial interests in the Securities for and on behalf of such holders of Securities or their representatives, as a custodial agent appointed for the sole purpose of holding such beneficial interests. Except in limited circumstances, purchasers of beneficial interests in the Global Security will not be entitled to receive Securities in definitive form. Rather, the Securities will be represented in book-entry form only.</p>
Amendments to the Global Security:	<p>The Bank may amend the Global Security without the consent of the holders of the Securities if, in the opinion of the Bank, acting reasonably, the amendment would not materially and adversely affect the interests of the holders of the Securities.</p> <p>In other cases, the Bank may amend the Global Security if the amendment is approved by a resolution passed by the favourable votes of the holders of not less than 66 2/3% of the outstanding principal amount of the Securities represented by the Global Security represented at a meeting convened for the purposes of considering the resolution, or by written resolution signed by holders of not less than 66 2/3% of the outstanding principal amount of the Securities represented by the Global Security. Each holder is entitled to one vote per \$100 of principal amount for the purpose of voting at meetings convened for considering the resolution or for the purpose of passing a written resolution. The Securities do not carry the right to vote in any other circumstances.</p>
Adjustments relating to the Underlying Securities:	<p>If an Extraordinary Event occurs, 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.</p>
Delay in determination of Closing Prices:	<p>Subject to the Bank's 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 a Closing Price of the Underlying Securities is to be determined, then the day on which such Closing Price will be determined will instead be the earlier of (i) the next Exchange Day for the Underlying Securities on which there is no such Extraordinary Event, and (ii) the fifth day that would otherwise have been an Exchange Day for the Underlying Securities following the day on which the Closing Price was supposed to have been determined, 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 Closing Price of the Underlying Securities on such day using, to the extent possible, the Closing Price for the Underlying Securities 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 Closing Price determination will be postponed to the first Business Day after the Closing Price of the Underlying Securities to which the affected Securities are linked has been determined.</p>
Acceleration upon Occurrence of Extraordinary Event:	<p>If an Extraordinary Event occurs and continues for at least five consecutive Exchange Days, then the Bank may, by notice to Securityholders (an "Acceleration Notice") accelerate the calculation of the return payable in respect of all Securities 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 Securityholders of record on the Special Payment Date. Instead of the Final Redemption Amount at maturity of the Securities, the Bank will pay the greater of (i) an amount equal to 1.00% of the Principal Amount of the Securities and (ii) the Actualized Fair Value of the Securities, calculated as at the Accelerated Valuation Date, to Securityholders of record on the Special Payment Date. Such payment will constitute payment in full on the Securities and no other payments will be made or due in respect of the Securities at any time after such date.</p>

SALES RESTRICTIONS AND DISCLAIMER

Selling Restrictions	<p>No action has been or will be taken that would permit a public offering of the Securities or possession or distribution of any offering material in relation to the Securities in any jurisdiction where action for that purpose is required. No purchase, offer, sale or re-sale or delivery of any Securities or distribution of any offering material relating to the Securities may be made in or from any jurisdiction except in circumstances which will result in compliance with any applicable laws and regulations and which will not impose any obligation on the Bank, the guarantor, if any, or the Calculation Agent.</p>
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- Resale Restrictions:** The distribution of the Securities is being made on a private placement basis and will be subject to a four-month hold period under Canadian securities law. Accordingly, any resale of the Securities must be made: (i) through an appropriately registered dealer or in accordance with an exemption from the registered dealer requirements of applicable provincial securities laws; and (ii) during such four-month hold period, in accordance with, or pursuant to an exemption from, or in a transaction not subject to, the prospectus requirements of those laws. The Securities may be relatively illiquid during the four-month hold period due to the restrictions on resale described above.
- On-sales of Securities:** In addition to the specific restrictions in relation to offers in Canada stated above, any on-sales, subsequent offer or buy back of the Securities should only be made in accordance with any applicable law and regulation. In particular any applicable securities laws or regulations relating to the requirement for a prospectus or other prescribed disclosure or any requirement to conduct suitability or appropriateness assessments and any requirement regarding the disclosure of commissions and/or fees and/or non-monetary benefits paid or received should be complied with.
- US Offering Information:** Securities have not been and will not be registered under the *Securities Act of 1933* (United States), as amended (the “Securities Act”) and may not be offered or sold within the United States or to or for the account or benefit of U.S. persons except in accordance with Regulation S under the Securities Act or pursuant to an exemption from the registration requirements of the Securities Act.

OTHER RISK INFORMATION

- Product Risk:** The Securities are not principal protected. Depending on the performance of the Underlying Securities over the term of the Securities, you could lose substantially all of your investment.
- Issuer Risk:** Investors bear the issuer risk. The value of the Securities is dependent not only on the performance of the Underlying Securities, but also on the creditworthiness of the Bank, which may vary over the term of the Securities. The ratings of the Bank noted above reflect the independent opinion of the rating agencies as to the safety of the Bank’s payment obligations. These ratings are not a guarantee of credit quality. The ratings do not take into consideration any risk associated with fluctuations in the market value of the Securities, or where factors other than the Banks’ credit quality determine the amount required to be paid by the Bank with respect to the Securities.
- Differences from a direct investment in the Underlying Securities:** The return on the Securities will not reflect the return you would realize if you owned the Underlying Securities. As such, the Securities are subject to different risks than, and the return on the Securities will not be identical to the returns associated with, such investment.
- Investing in the Securities will not make you a holder of the Fund, the Underlying Securities or the Tracked Index. You will not have any voting rights, any right to receive dividends or other distributions or any other rights with respect to the Fund, the Underlying Securities and the Tracked Index.
- Liquidity Risk:** The investor should be prepared to hold this Security until maturity should it not be called or terminated early, if such option exists, by the Bank. The Bank will, however, use its reasonable endeavours to provide liquidity to the Security but is not obliged to do so and may stop providing liquidity at any time without notice. The price at which you purchase the Securities include selling commissions paid by the Bank and hedging costs and profits that the Bank or its affiliates expect to incur or realize. These selling commissions, costs and profits will reduce the secondary market price, if any secondary market develops, for the Securities. As a result, you may experience an immediate and substantial decline in the value of your securities on the Issue Date.
- Suitability:** This document is being provided to you based on our reasonable belief that you are an accredited investor that is capable of assessing the merits and risks of the matters discussed herein. Institutions referencing this document or extracting information from this document with which to advise their clients will need to ensure that the information satisfies their local jurisdictional requirements and applicable securities laws for conducting business with private and /or retail clients.
- Non-CDIC Protection:** **The Securities will not constitute deposits that are insured under the *Canada Deposit Insurance Corporation Act*.**



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DEFINITIONS

- Actualized Fair Value:** "Actualized Fair Value" per Security is the fair value of the 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 any relevant factors, including the lack of principal protection (subject to the 1.00% floor), the price of the Underlying Securities as at the Accelerated Valuation Date relative to the price of the Underlying Securities as at the Initial Valuation Date; the prevailing level of interest rates; the volatility of the Underlying Securities; the existence of any right to redeem the Securities and the time remaining until such redemption right may be exercised by the Bank; 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.
- Business Day:** "Business Day" means a day on which commercial banks are open for business and able to effect transactions in foreign exchange and foreign currency deposits in Toronto, Ontario, Canada and a day on which book-entry transfers may be effected through CDS. If any date on which any action is otherwise required to be taken in respect of the Securities is not a Business Day, the date on which such action shall be taken shall, except as otherwise indicated, be the next following Business Day and, if the action involves payment of any amount, no interest or other compensation shall be paid as a result of any such delay.
- Calculation Agent:** A calculation agent will be appointed by the Bank from time to time (the "Calculation Agent"). The calculation agent will initially be RBC Dominion Securities Inc.
- Absent manifest error, all determinations of the Calculation Agent will be final and binding on you and the Bank, without any liability on the part of the Calculation Agent except in the case of the Calculation Agent's negligence, bad faith or wilful misconduct. The Calculation Agent will act solely as the Bank's agent and will not assume any obligation or duty to, or any relationship of agency or trust for or with, the Securityholders.
- The Bank may vary or terminate the appointment of the Calculation Agent in respect of the Securities and may appoint another Calculation Agent at any time without your consent.
- Exchange:** "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 Tracked Index or the Underlying Securities trade.
- Exchange Day:** "Exchange Day" means a day on which each 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 an Exchange is scheduled to close prior to its regular closing time.
- Extraordinary Event:** "Extraordinary Event" means any event, circumstance or cause that the Bank determines, and the Calculation Agent confirms, has or will have a material adverse effect on the ability of the Bank to perform its obligations under the Securities, or to hedge its position in respect of its obligation to make payment of amounts owing thereunder, including as a result of any of Royal 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 the 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 the Bank to perform its obligations under the Securities or for dealers to execute, maintain or modify a hedge in a position in respect of the Underlying Securities;
 - (iii) the taking of any action by any governmental, administrative, legislative or judicial authority or power of Canada or any other country or political subdivision thereof that has a material adverse effect on the financial markets of Canada or a country in which an Exchange is located; or
 - (iv) any outbreak or escalation of hostilities or other national or international calamity or crisis (including, without limitation, natural calamities) which has or would have a material adverse effect on the Bank's ability to perform its obligations under the Securities or of a dealer to execute, maintain or modify a hedge



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of a position with respect to the Tracked Index or the Underlying Securities or a material and adverse effect on the economy of Canada or any country in which an Exchange is located or on the trading of securities generally on any Exchange.

Market Disruption Event: "Market Disruption Event" means, in respect of the Underlying Securities, the occurrence of any of the following events:

- (i) the Delisting of the Underlying Securities;
- (ii) a suspension, absence or material limitation of trading on an Exchange for the Underlying Securities, or futures contracts, options or other derivatives relating to the Underlying Securities, including a limitation on trading on any Exchange on any one day by reason of movements in prices that exceed the price permitted by such Exchange;
- (iii) the inability of an investor in the normal course to buy, sell, redeem or settle a transaction in respect of the Underlying Securities of the Fund or to obtain a price or value for such Underlying Securities;
- (iv) the temporary or permanent discontinuance, cessation or unavailability of the Fund and no successor fund is selected by the Calculation Agent within five Exchange Days of the discontinuance, cessation or unavailability of such Fund; or
- (v) 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.

Discontinuation of the Fund

If the price of the Underlying Securities which is required for determination of any amount payable on a Security is not announced or published by the Fund Sponsor 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 the price of the Underlying Securities, which third party is acceptable to the Calculation Agent, then the applicable price will be determined by reference to the price of the Underlying Securities as so calculated and announced by such third party.

If at any time the Fund Sponsor or the third party ceases to announce or publish the applicable price of the Underlying Securities, either temporarily or permanently, or if at any time the Bank is unable to hedge its position in respect of its obligation to make payment of amounts owing under Securities linked to the Fund (the "**discontinued Fund**"), including as a result of the general unavailability of information or the discontinuance or suspension of trading on any Exchange for futures contracts, forward contracts or options contracts related to the Fund, then the Calculation Agent may designate another fund (a "**successor fund**") to replace the 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 of the Fund, and subject to appropriate adjustments being made to the terms and provisions of the Securities which the Calculation Agent determines to be necessary or appropriate to preserve the economic value of the Securities as of the effective date of replacement.