



Capital
Markets

INDEX LINKED SECURITIES | RBC INVESTMENT SOLUTIONS

RBC Solactive Canada Utilities 160 AR Index Geared Buffered Callable Yield 11.00% Securities (CAD), Series 45 Non-Principal Protected Security

7.0 year term

Performance linked to the
Solactive Canada Utilities 160 AR
Index

Potential 11.0000% coupon
per annual period

Subscriptions
Close

on or about
February 7, 2023

FUNDSERV

RBC6595

Autocall
Observation Dates

February 8, 2024 and
semi-annually thereafter

This summary is qualified in its entirety by a pricing supplement (the “**Pricing Supplement**”), the base shelf prospectus dated March 25, 2022, the program prospectus supplement dated March 28, 2022, as supplemented November 11, 2022 and the product prospectus supplement dated March 28, 2022 in respect of index linked securities, as supplemented November 11, 2022.

www.rbcnotes.com

KEY TERMS

Issuer:	Royal Bank of Canada
Issuer Credit Ratings:	Moody's: Aa1; S&P: AA-; DBRS: AA
Currency:	CAD
Minimum Investment:	50 Securities or \$5,000
Term:	Approximately 7.0 years
Principal at Risk:	The Securities are not principal protected.
Underlying Index:	The return on the Securities is linked to the adjusted returns of the Solactive Canada Utilities 160 AR Index (the “ Underlying Index ”). The Underlying Index is an adjusted return index that aims to track the gross total return performance of the Solactive Canada Utilities Index TR (the “ Target Index ”), subject to a reduction of a synthetic dividend of 160 index points per annum calculated daily in arrears (the “ Adjusted Return Factor ”). For the avoidance of doubt, the return on the Securities is linked to the Underlying Index and is not linked to the Target Index. The Closing Level on January 12, 2023 was 3,453.73. The Adjusted Return Factor divided by the Closing Level was therefore equal to 4.633% on January 12, 2023. If an Autocall Redemption Event does not occur, over the term of the Securities, the sum of the Adjusted Return Factor will be approximately 1,120 index points, representing 32.429% of the Closing Level on January 12, 2023. For the calculation of the level of the Target Index, any dividends or other distributions paid on the constituent securities of the Target Index are assumed to be reinvested across all of the constituent securities of the Target Index. As of January 12, 2023, the annual dividend yield on the Target Index was 4.2512%, representing an aggregate dividend yield of approximately 33.8343% compounded annually over the term of the Securities, on the assumption that the dividend yield remains constant. Securities do not represent an interest in the Underlying Index, the Target Index or in the securities of the entities that comprise the Target Index, and holders will have no right or entitlement to such securities including, without limitation, redemption rights (if any), voting rights or rights to receive dividends or other distributions paid on such securities.
Issue Date:	February 14, 2023
Initial Index Level:	The “ Initial Index Level ” is the Closing Level on February 8, 2023 (the “ Initial Valuation Date ”).
Buffer:	20.00%. The principal of the Securities will be protected against a decline of up to 20.00% in the performance of the Underlying Index, but declines in the performance of the Underlying Index beyond the Buffer will be subject to the Gearing Multiplier.

Gearing Multiplier:	100/80, which is 1.25, applied only if the Percentage Change in the Underlying Index is negative, declining by more than 20.00%.
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A final base shelf prospectus containing important information relating to the securities described in this document has been filed with the securities regulatory authorities in each of the provinces and territories of Canada. A copy of the final base shelf prospectus, any amendment to the final base shelf prospectus and any applicable shelf prospectus supplement that has been filed, is required to be delivered with this document. This document does not provide full disclosure of all material facts relating to the securities offered. Investors should read the final base shelf prospectus, any amendment and any applicable shelf prospectus supplement for disclosure of those facts, especially risk factors relating to the securities offered, before making an investment decision.

KEY TERMS CONTINUED

Protection Buffer Level:	The “ Protection Buffer Level ” is 80.00% of the Initial Index Level.																		
Coupon Barrier Level:	The “ Coupon Barrier Level ” is 80.00% of the Initial Index Level.																		
Final Index Level:	The “ Final Index Level ” is the Closing Level on February 8, 2030 (the “ Final Valuation Date ”).																		
Maturity Date:	February 13, 2030																		
Closing Level:	The “ Closing Level ” on any date is the official closing level of the Underlying Index quoted on www.solactive.com for such date, as determined by the Calculation Agent.																		
Observation Dates:	<p>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 August 8, 2023 to and including February 8, 2030. If any such Observation Date is not an Exchange Day, it shall be postponed to the next succeeding Exchange Day.</p> <p>Provided that the Securities are not redeemed by the Bank as described below, the Bank intends the Observation Dates to be:</p> <table> <tr> <td>August 8, 2023</td><td>February 8, 2024</td><td>August 8, 2024</td><td>February 10, 2025</td></tr> <tr> <td>August 8, 2025</td><td>February 9, 2026</td><td>August 10, 2026</td><td>February 8, 2027</td></tr> <tr> <td>August 9, 2027</td><td>February 8, 2028</td><td>August 8, 2028</td><td>February 8, 2029</td></tr> <tr> <td>August 8, 2029</td><td>February 8, 2030</td><td></td><td></td></tr> </table>			August 8, 2023	February 8, 2024	August 8, 2024	February 10, 2025	August 8, 2025	February 9, 2026	August 10, 2026	February 8, 2027	August 9, 2027	February 8, 2028	August 8, 2028	February 8, 2029	August 8, 2029	February 8, 2030		
August 8, 2023	February 8, 2024	August 8, 2024	February 10, 2025																
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August 9, 2027	February 8, 2028	August 8, 2028	February 8, 2029																
August 8, 2029	February 8, 2030																		
Interest Payment Dates:	<p>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 August 11, 2023 to and including February 13, 2030. Provided that the Securities are not redeemed by the Bank as described below, the Bank intends the Interest Payment Dates to be:</p> <table> <tr> <td>August 11, 2023</td><td>February 13, 2024</td><td>August 13, 2024</td><td>February 13, 2025</td></tr> <tr> <td>August 13, 2025</td><td>February 12, 2026</td><td>August 13, 2026</td><td>February 11, 2027</td></tr> <tr> <td>August 12, 2027</td><td>February 11, 2028</td><td>August 11, 2028</td><td>February 13, 2029</td></tr> <tr> <td>August 13, 2029</td><td>February 13, 2030</td><td></td><td></td></tr> </table>			August 11, 2023	February 13, 2024	August 13, 2024	February 13, 2025	August 13, 2025	February 12, 2026	August 13, 2026	February 11, 2027	August 12, 2027	February 11, 2028	August 11, 2028	February 13, 2029	August 13, 2029	February 13, 2030		
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August 13, 2029	February 13, 2030																		
Interest Payments:	<p>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 5.5000% 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 \times 5.5000\%$.</p> <p>Thus, if a Digital Payout Event occurs:</p> <p>(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 \$11.00; and</p> <p>(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 \$5.50.</p> <p>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.</p>																		
Digital Payout Event:	A “ Digital Payout Event ” will occur if, on the relevant Observation Date, the Closing Level is greater than or equal to the Coupon Barrier Level.																		
Autocall Redemption Event:	<p>An “Autocall Redemption Event” will occur if the Closing Level on an Observation Date, other than the first and last Observation Date, is greater than or equal to 100.00% of the Initial Index Level (the “Autocall Redemption Level”). 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.</p>																		
Payment at Maturity:	<p>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:</p> <p>(a) if the Final Index Level is greater than or equal to the Protection Buffer Level, \$100; or</p> <p>(b) if the Final Index Level is less than the Protection Buffer Level, the Final Redemption Amount will be reduced by the amount of any decline beyond the Buffer multiplied by the Gearing Multiplier, and the Final Redemption Amount will be:</p> $\$100.00 + [\$100.00 \times (\text{Percentage Change} + 20.00\%) \times \text{Gearing Multiplier}]$																		

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. The minimum payment at maturity is \$1.00.

Percentage Change:	<p>The “Percentage Change” is the amount, expressed as a percentage rounded to three decimal places, equal to:</p> $\frac{(\text{Final Index Level} - \text{Initial Index Level})}{\text{Initial Index Level}}$
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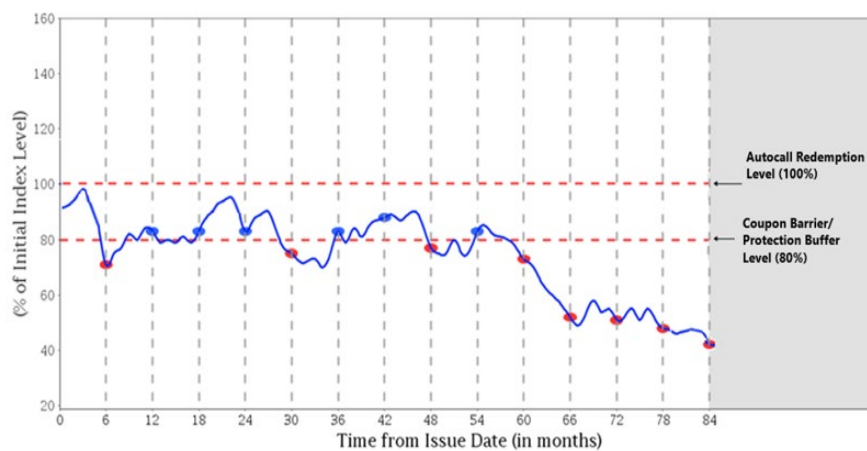
Secondary Market:	<p>Fundserv, RBC6595</p> <p>Generally, to be effective on a Business Day, a redemption request will need to be initiated by 2:00 p.m. (Toronto time) on that Business Day (or such other time as may be established by Fundserv). Any request received after such time will be deemed to be a request sent and received on the next following Business Day.</p>
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Early Trading Charge Schedule:	If Sold Within the Following	
	No. of Days from Issue Date	Early Trading Charge (% of Principal Amount)
	1 - 45 days	3.00%
	46 - 90 days	2.75%
	91 - 135 days	2.50%
	136 - 180 days	2.00%
	181 - 225 days	1.50%
	226 - 270 days	1.00%
	Thereafter	Nil

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 performance of the Underlying Index 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 performance of the Underlying Index 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 Buffer of 20.00%, a Gearing Multiplier of 100/80, which is 1.25, a Coupon Barrier Level of 80.00% of the Initial Index Level, a Protection Buffer Level of 80.00% of the Initial Index Level and an Autocall Redemption Level of 100.00% of the Initial Index Level. 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 the Principal Amount



- Indicates Observation Dates on which the Coupon Barrier Level 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.
- Solactive Canada Utilities 160 AR Index

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

(i) Interest Payments

In this example, there is a Digital Payout Event on 6 of the 14 Observation Dates. On the other 8 Observation Dates, no Digital Payout Event would occur because the Closing Level is below the Coupon Barrier Level. Therefore, the Interest Payment of \$5.50 per Interest Period would be payable for 6 Interest Periods on the applicable Interest Payment Date, for total Interest Payments of:

$$\begin{aligned} &\text{Principal Amount of Securities} \times 5.5000\% \text{ per Interest Period} \times 6 \text{ Interest Periods} \\ &\$100 \times 5.5000\% \times 6 = \$33.00 \end{aligned}$$

(ii) Final Redemption Amount

In this example, the Initial Index Level is 3,453.73 and the Final Index Level is 1,381.49. Therefore, the Final Redemption Amount would be calculated as follows:

Initial Index Level = 3,453.73

Final Index Level = 1,381.49

Percentage Change = $(1,381.49 - 3,453.73) / 3,453.73 = -0.60000$ or -60.000%

Since the Final Index Level is below its Protection Buffer Level, the Final Redemption Amount is reduced by the amount of any decline beyond the Buffer multiplied by the Gearing Multiplier and is calculated as follows:

Final Redemption Amount = $\$100.00 + [\$100.00 \times (-60.000\% + 20.00\%) \times 1.25] = \50.00

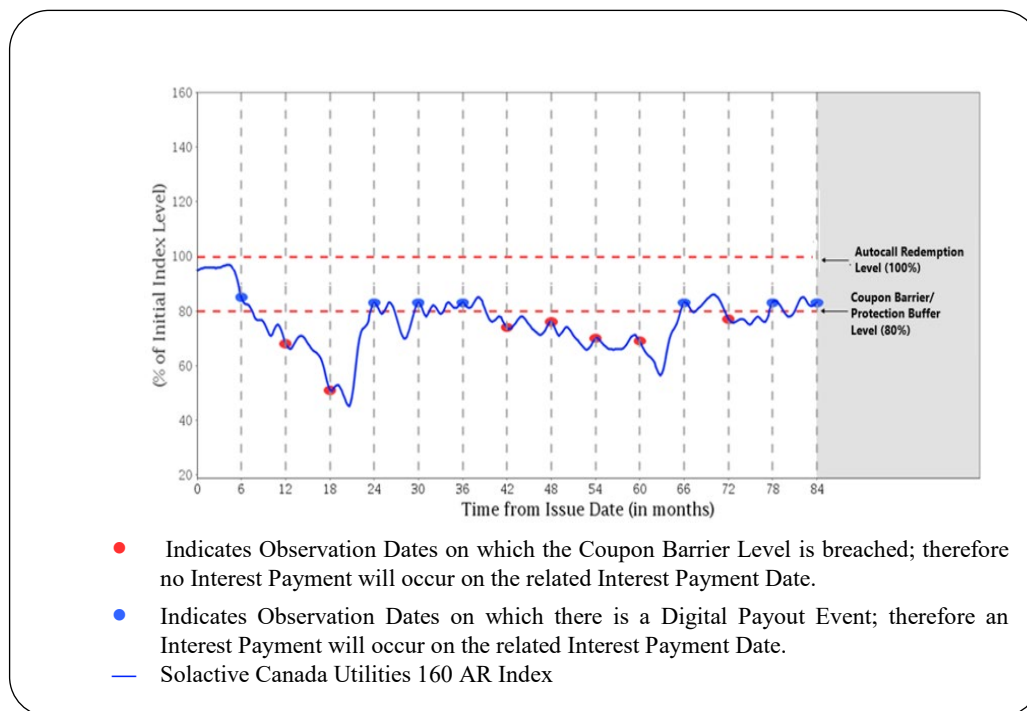
Therefore, the total amounts payable per Security from the Issue Date to the Maturity Date are:

Sample Calculations:
(continued)

- (a) Total Interest Payments: \$33.00
- (b) Final Redemption Amount: \$50.00
- (c) Total amount paid over the term of the Securities: \$83.00

The equivalent annually compounded rate of return in this example is -2.63%.

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



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

(i) Interest Payments

In this example, there is a Digital Payout Event on 7 of the 14 Observation Dates. On the other 7 Observation Dates, no Digital Payout Event would occur because the Closing Level is below the Coupon Barrier Level. Therefore, the Interest Payment of \$5.50 per Interest Period would be payable for 7 Interest Periods on the applicable Interest Payment Date for total Interest Payments of:

$$\begin{aligned} &\text{Principal Amount of Securities} \times 5.5000\% \text{ per Interest Period} \times 7 \text{ Interest Periods} \\ &\$100 \times 5.5000\% \times 7 = \$38.50 \end{aligned}$$

(ii) Final Redemption Amount

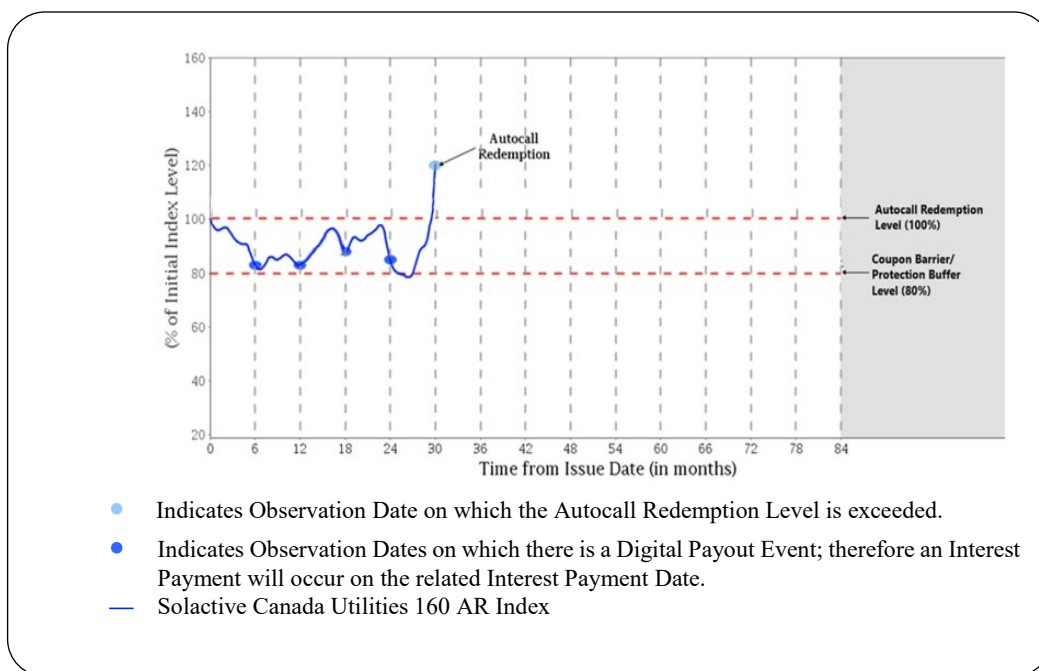
In this example, since the Final Index Level is 2,832.06, which is above the Protection Buffer Level of 80.00% of the Initial Index Level of 3,453.73, being 2,762.98, the Final Redemption Amount per Security is equal to \$100.00.

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

- (a) Total Interest Payments: \$38.50
- (b) Final Redemption Amount: \$100.00
- (c) Total amount paid over the term of the Securities: \$138.50

The equivalent annually compounded rate of return in this example is 4.76%.

Example #3: Gain Scenario with Autocall Redemption Event



In this scenario, the Closing Level is at or above the Autocall Redemption Level on the Observation Date that falls 30 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 5 Observation Dates prior to the redemption of the Securities because the Closing Level is at or above the Coupon Barrier Level on each such date. Therefore, the Interest Payment of \$5.50 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 \times 5.5000% per Interest Period \times 5 Interest Periods

$$\$100 \times 5.5000\% \times 5 = \$27.50$$

(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: \$27.50

(b) Autocall Redemption Amount: \$100.00

(c) Total amount paid over the term of the Securities: \$127.50

The equivalent annually compounded rate of return in this example is 10.21%.

Initial Estimated Value:

The initial estimated value of the Securities as of January 12, 2023 was \$95.14 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. The initial estimated value of the Securities is an estimate only and is based on the value of the Bank's obligation to make the payments on the Securities. We describe our determination of the initial estimated value in more detail in the Pricing Supplement.

The Solactive Canada Utilities 160 AR Index is owned, calculated, administered and published by Solactive AG ("Solactive"), and the name "Solactive" is a registered trademark of Solactive. The Solactive Canada Utilities 160 AR Index has been licensed for use by the Bank in connection with the Securities. The Securities are not sponsored, promoted, sold or supported in any other manner by Solactive and Solactive makes no representation or warranty, express or implied, regarding the advisability of investing in such product(s). Solactive does not guarantee the accuracy or completeness of the Solactive Canada Utilities 160 AR Index or the Solactive Canada Utilities Index TR, any data included therein, or any data from which it is derived, nor has any liability for any errors, omissions, or interruptions therein.

All capitalized terms unless otherwise defined have the meanings ascribed to them in the Pricing Supplement.

Clients should evaluate the financial, market, legal, regulatory, credit, tax and accounting risks and consequences of the proposal before entering into any transaction, or purchasing any instrument. Clients should evaluate such risks and consequences independently of Royal Bank of Canada and the Dealers, RBC Dominion Securities Inc. and iA Private Wealth Inc., respectively.

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

An investment in the Securities involves risks. The Securities are linked to the Underlying Index which reflects (i) the applicable price changes of the constituent securities of the Target Index and any dividends and distributions paid in respect of such securities, without deduction of any withholding tax or other amounts accruing thereon to which an investor holding the constituent securities of the Target Index would typically be exposed, less (ii) the Adjusted Return Factor. An investment in the Securities is not the same as a direct investment in the securities that comprise the Target Index and investors have no rights with respect to the securities underlying such index. The return on the Securities will not reflect the total return that an investor would receive if such investor owned the securities that comprise the Target Index. 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 level of the Underlying Index and fluctuations in interest rates, among other factors. Index levels are volatile and an investment in the Securities may be considered to be speculative. Since the Securities are not principal protected and the Principal Amount will be at risk, you could lose substantially all of your investment.

