



## RBC LiONS™ Canadian Banks Accelerator Securities, **Series 22** Non-Principal Protected Security

**5.5 year term**

**425%** of the appreciation of a notional portfolio of the common shares of six Canadian chartered banks

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on or about  
September 20, 2019

FUNDSERV

**RBC4112**

This summary is qualified in its entirety by a pricing supplement (the "Pricing Supplement"), the base shelf prospectus dated January 30, 2018, the program prospectus supplement dated January 30, 2018 and the product prospectus supplement dated January 30, 2018, in respect of equity, unit and debt linked securities.

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### KEY TERMS

Issuer:	Royal Bank of Canada
Issuer Credit Ratings:	Moody's: Aa2; S&P: AA-; DBRS: AA
Currency:	CAD
Minimum Investment:	50 Debt Securities or \$5,000
Term:	Approximately 5.5 years
Principal at Risk:	The Debt Securities are not principal protected
Underlying Securities:	Return linked to the price performance (excluding any dividends and other distributions) of a notional portfolio of the common shares of the six Canadian-based financial institutions listed below, equally weighted. The Debt Securities do not represent an interest in the Underlying Securities, and holders will have no right or entitlement to the Underlying Securities, including, without limitation, redemption rights (if any), voting rights or rights to receive dividends and other distributions paid on any of such Underlying Securities (the annual dividend yield on the Portfolio as of August 16, 2019 was 4.52%, representing an aggregate dividend yield of approximately 27.53% compounded annually over the five and one half-year term, on the assumption that the dividend yield remains constant).

Company Name	Symbol	Company Name	Symbol
Royal Bank of Canada	RY	The Toronto-Dominion Bank	TD
Bank of Montreal	BMO	National Bank of Canada	NA
The Bank of Nova Scotia	BNS	Canadian Imperial Bank of Commerce	CM

Issue Date:	September 27, 2019
Initial Portfolio Value:	The "Initial Portfolio Value" is the Portfolio Value on September 23, 2019.
Final Portfolio Value:	The "Final Portfolio Value" is the Portfolio Value on March 24, 2025.
Maturity Date:	March 27, 2025

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

Portfolio Value:	The “ <b>Portfolio Value</b> ” for the Portfolio on any Exchange Day is calculated by: (a) multiplying (i) the official closing price of each Underlying Security, as announced by the TSX, on such Exchange Days by (ii) the corresponding Number of Underlying Securities for such Underlying Security; and (b) aggregating the resulting products.	
Number of Underlying Securities:	The “ <b>Number of Underlying Securities</b> ” for each Underlying Security is calculated by: (i) multiplying the Portfolio Weight for such Underlying Security by the aggregate Principal Amount of Debt Securities issued under this offering; and (ii) dividing the resulting product by the official closing price of such Underlying Security, as announced by the TSX on the Initial Valuation Date.	
Payment at Maturity:	<p>Payment at maturity will be based on the price performance (or “<b>Percentage Change</b>”) of the Portfolio measured from the Initial Portfolio Value to the Final Portfolio Value and, in the case of a positive Percentage Change only, multiplied by a Participation Rate of 425.00%. The amount payable (the “<b>Redemption Amount</b>”) on each \$100 Principal Amount per Debt Security at maturity will be determined as follows:</p> <p>If the Percentage Change is <b>positive</b>, then the Redemption Amount will be:</p> <ul style="list-style-type: none"> <li>• <math>\\$100 + (\\$100 \times \text{Percentage Change} \times \text{Participation Rate})</math></li> </ul> <p>If the Percentage Change is <b>zero or negative</b>, then the Redemption Amount will be reduced by the amount of any decline and the Redemption Amount will be:</p> <ul style="list-style-type: none"> <li>• <math>\\$100 + (\\$100 \times \text{Percentage Change})</math></li> </ul> <p>All dollar amounts will be rounded to the nearest whole cent. The minimum payment at maturity is \$1.00 per Debt Security.</p>	
Percentage Change:	<p>The “<b>Percentage Change</b>” is the amount, expressed as a percentage rounded to two decimal places, equal to:</p> $\frac{(\text{Final Portfolio Value} - \text{Initial Portfolio Value})}{\text{Initial Portfolio Value}}$	
Participation Rate:	425.00% applied only if the Percentage Change is positive.	
Secondary Market:	Fundserv – RBC4112	
Early Trading Charge Schedule:	If Sold Within the Following No. of Days from Issue Date	Early Trading Charge (% of Principal Amount)
	1-180 days	3.50%
	181-270 days	3.00%
	271-360 days	2.50%
	361-450 days	1.50%
	451-540 days	0.50%
	Thereafter	Nil

### Hypothetical Calculation of the Initial Portfolio Value:

It is assumed that the aggregate Principal Amount of Debt Securities issued under the offering is \$15,000,000 and the (hypothetical) closing prices of the Underlying Securities comprising the Portfolio on the Initial Valuation Date are as illustrated in the table below:

Company Name	Symbol	Closing Price (\$)	Underlying Security Value in Portfolio (\$)	Portfolio Weight	Number of Underlying Securities
Royal Bank of Canada	RY	103.78	2,500,000.00	16.667%	24,089.41993
Bank of Montreal	BMO	102.54	2,500,000.00	16.667%	24,380.72947
The Bank of Nova Scotia	BNS	71.26	2,500,000.00	16.667%	35,082.79540
The Toronto-Dominion Bank	TD	73.68	2,500,000.00	16.667%	33,930.51031
National Bank of Canada	NA	61.96	2,500,000.00	16.667%	40,348.61201
Canadian Imperial Bank of Commerce	CM	109.25	2,500,000.00	16.667%	22,883.29519

Based on those assumptions, the Initial Portfolio Value would be the sum of the Underlying Security values, which is \$15,000,000.

### Hypothetical Calculation of the Final Portfolio Value:

For illustration purposes, it is assumed that no Extraordinary Event has occurred and that the (hypothetical) closing prices of the Underlying Securities comprising the Portfolio on the Final Valuation Date are as illustrated in the table below. Certain dollar values for the purposes of the table below have been rounded to two decimal places.

Company Name	Symbol	Closing Price (\$)	Number of Underlying Securities	Underlying Security Value in Portfolio (\$)
Royal Bank of Canada	RY	128.27	24,089.41993	3,090,000.01
Bank of Montreal	BMO	126.74	24,380.72947	3,090,000.01
The Bank of Nova Scotia	BNS	88.08	35,082.79540	3,090,000.01
The Toronto-Dominion Bank	TD	91.07	33,930.51031	3,090,000.01
National Bank of Canada	NA	76.58	40,348.61201	3,090,000.01
Canadian Imperial Bank of Commerce	CM	135.03	22,883.29519	3,090,000.01

Based on those assumptions, the Final Portfolio Value would be the sum of the Underlying Security values, which is \$18,540,000.06 (note that this is the sum of the values from the “Underlying Security Value in Portfolio (\$)” column).

### Sample Calculations of Redemption Amount

The examples set out below are included for illustration purposes only. The Portfolio Values used to illustrate the calculation of the Redemption Amount are not estimates or forecasts of the Initial Portfolio Value and Final Portfolio Value on which the calculation of the Percentage Change, and in turn the Redemption Amount, will depend. All examples assume that a holder of the Debt Securities has purchased Debt Securities with an aggregate principal amount of \$100 and that no Extraordinary Event has occurred. All dollar amounts in the examples below are rounded to the nearest whole cent.

#### Example #1 — Calculation of the Redemption Amount where the Percentage Change is negative.

Assuming that the Initial Portfolio Value is \$15,000,000.00 and the Final Portfolio Value is \$9,799,559.76, the Redemption Amount on each \$100 Principal Amount per Debt Security would be calculated as follows:

Initial Portfolio Value = \$15,000,000.00

Final Portfolio Value = \$9,799,559.76

Percentage Change =  $(\$9,799,559.76 - \$15,000,000.00) / \$15,000,000.00 = -0.34670$  or -34.67%

Since the Percentage Change is negative, the Redemption Amount is calculated as follows:

Redemption Amount =  $\$100 + (\$100 \times -34.67\%) = \$65.33$

In this example, the Redemption Amount results in a loss on the Principal Amount equivalent to an annually compounded loss rate of 7.45%.

#### Example #2 — Calculation of the Redemption Amount where the Percentage Change is positive.

Assuming that the Initial Portfolio Value is \$15,000,000.00 and the Final Portfolio Value is \$18,540,000.06, the Redemption Amount on each \$100 Principal Amount per Debt Security would be calculated as follows:

Initial Portfolio Value = \$15,000,000.00

Final Portfolio Value = \$18,540,000.06

Percentage Change =  $(\$18,540,000.06 - \$15,000,000.00) / \$15,000,000.00 = 0.23600$  or 23.60%

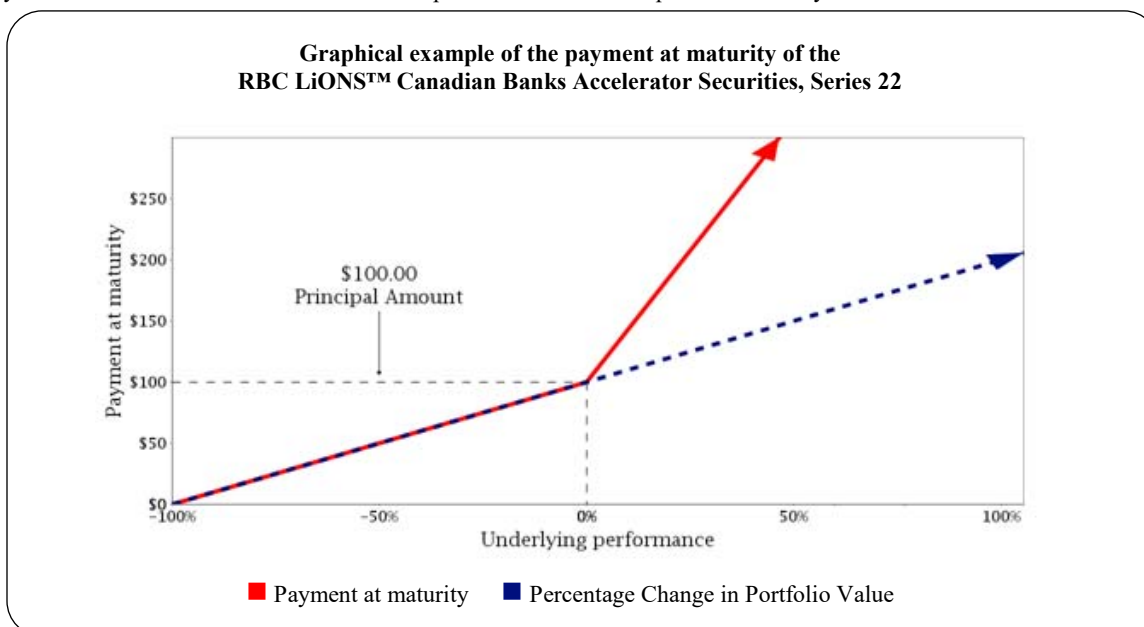
Since the Percentage Change is positive, the Redemption Amount is calculated as follows:

Redemption Amount =  $\$100 + (\$100 \times 425\% \times 23.60\%) = \$200.30$

In this example, the Redemption Amount provides a return on the Principal Amount equivalent to an annually compounded rate of return of 13.46%.

## GRAPHICAL DESCRIPTION OF THE REDEMPTION AMOUNT

The graph set out below is included for illustration purposes only. The values of the Portfolio used to illustrate the calculation of the Redemption Amount are not estimates or forecasts of the Initial Portfolio Value and Final Portfolio Value on which the calculation of the Percentage Change, and in turn the Redemption Amount, will depend. This graph shows a limited range of hypothetical returns on the Portfolio and is intended to be representative of that range only. Returns on the Portfolio not shown on the graph are still possible to achieve and the corresponding returns on the Debt Securities should be calculated using the formulas set out in the Pricing Supplement. This graph demonstrates what the return on the Debt Securities will be for a specific price performance of the Portfolio. There can be no assurance that any specific return will be achieved. All examples assume that a holder of the Debt Securities has purchased Debt Securities with an aggregate Principal Amount of \$100 and that no Extraordinary Event has occurred. The minimum Redemption Amount is \$1.00 per Debt Security.



The initial estimated value of the Debt Securities as of August 15, 2019 was \$89.00 per Debt 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 Debt 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 Debt Securities is an estimate only and is based on the value of the Bank's obligation to make the payments on the Debt Securities. We describe our determination of the initial estimated value in more detail in the Pricing Supplement.

All capitalized terms unless otherwise defined have the meaning 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 Laurentian Bank Securities Inc., respectively.

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

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

An investment in the Debt Securities involves risks. An investment in the Debt Securities is not the same as a direct investment in the securities that comprise the Portfolio and investors have no rights with respect to the securities in the Portfolio. The Debt Securities are considered to be "specified derivatives" under applicable Canadian securities laws. If you purchase Debt Securities, you will be exposed to fluctuations in interest rates and changes in the Portfolio Value, among other factors. Price changes may be volatile and an investment in the Debt Securities may be considered to be speculative. Since the Debt Securities are not principal protected and the Principal Amount will be at risk, you could lose substantially all of your investment.