

ROYAL BANK OF CANADA  
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Registration Statement No. 333-227001

Product Prospectus Supplement no. UBS-IND-1  
To the Prospectus dated September 7, 2018 and  
the Prospectus Supplement dated September 7, 2018  
Senior Global Medium-Term Notes, Series H  
Royal Bank of Canada  
Capped GEARS Linked to an Index  
Capped Buffer GEARS Linked to an Index  
Capped Airbag GEARS Linked to an Index  
Capped Trigger GEARS Linked to an Index  
Trigger In-Step Securities Linked to an Index  
Capped Trigger In-Step Securities Linked to an Index

General

Royal Bank of Canada may offer from time to time and sell Capped GEARS, Capped Buffer GEARS, Capped Airbag GEARS, Capped Trigger GEARS, Trigger In-Step Securities and Capped Trigger In-Step Securities (collectively, the “securities”), each linked to an index (the “Underlying”).

This product prospectus supplement describes terms that will apply generally to the securities, and supplements the terms described in the accompanying prospectus supplement and prospectus. A separate term sheet, free writing prospectus or pricing supplement, as the case may be, will describe terms that apply specifically to the securities, including any changes to the terms specified below. We refer to such term sheets, free writing prospectuses and pricing supplements generally as terms supplements. If the terms described in the relevant terms supplement are inconsistent with those described herein, the accompanying prospectus supplement or prospectus, the terms described in the relevant terms supplement will control.

The securities are senior unsecured debt obligations of Royal Bank of Canada.

Payment on the securities will be linked to the performance of an index, as described below.

For important information about U.S. federal tax consequences, see “Supplemental Discussion of U.S. Federal Income Tax Consequences” beginning on page PS-24.

The minimum denominations of the securities will be specified in the relevant terms supplement.

Investing in the securities is not equivalent to investing in any of the component securities of the Underlying.

The securities will not be listed on any securities exchange.

The securities are not subject to conversion into our common shares under subsection 39.2(2.3) of the Canada Deposit Insurance Corporation Act.

Your investment in the securities involves a number of risks. The securities differ from ordinary debt securities in that Royal Bank of Canada is not necessarily obligated to repay your full principal amount and the securities may have downside market risk similar to the Underlying. You could lose some or all of your investment in the securities, subject to any Buffer. See “Risk Factors” beginning on page PS-3.

None of the Securities and Exchange Commission (the “SEC”), any state securities commission or any other regulatory body has approved or disapproved of the securities or passed upon the accuracy of this product prospectus supplement or the accompanying prospectus and prospectus supplement. Any representation to the contrary is a criminal offense.

We may use this product prospectus supplement in the initial sale of a security. In addition, RBC Capital Markets, LLC, or RBCCM, or one of our other affiliates may use this product prospectus supplement in a market-making transaction in a security after its initial sale. Unless we or our agent informs the purchaser otherwise in the confirmation of sale, this product prospectus supplement is being used in a market-making transaction.

The securities will not constitute deposits insured by the Canada Deposit Insurance Corporation, the U.S. Federal Deposit Insurance Corporation or any other Canadian or U.S. governmental agency or instrumentality.

UBS Financial Services Inc.  
Markets, LLC  
September 7, 2018

RBC Capital

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In making your investment decision, you should rely only on the information contained or incorporated by reference in the terms supplement relevant to your investment, this product prospectus supplement and the accompanying prospectus supplement and prospectus with respect to the securities offered and with respect to Royal Bank of Canada. This product prospectus supplement, together with the relevant terms supplement, and the accompanying prospectus and prospectus supplement, contain the terms of the securities and supersede all other prior or contemporaneous oral statements as well as any other written materials including preliminary or indicative pricing terms, correspondence, trade ideas, structures for implementation, sample structures, fact sheets, brochures or other educational materials of ours, or any written materials prepared by UBS Financial Services Inc. or RBCCM. The information in the relevant terms supplement, this product prospectus supplement and the accompanying prospectus supplement and prospectus may only be accurate as of the dates of each of these documents, respectively.

The securities described in the relevant terms supplement and this product prospectus supplement are not appropriate for all investors, and involve important legal and tax consequences and investment risks, which should be discussed with your professional advisers. You should be aware that the regulations of the Financial Industry Regulatory Authority, or FINRA, and the laws of certain jurisdictions (including regulations and laws that require brokers to ensure that investments are suitable for their customers) may limit the availability of the securities. The relevant terms supplement, this product prospectus supplement and the accompanying prospectus supplement and prospectus do not constitute an offer to sell or a solicitation of an offer to buy the securities in any circumstances in which such offer or solicitation is unlawful.

In this product prospectus supplement, the relevant terms supplement and the accompanying prospectus supplement and prospectus, “we,” “us” and “our” refer to Royal Bank of Canada, unless the context requires otherwise.

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**SUMMARY**

The information in this “Summary” section is qualified by the more detailed information set forth in this product prospectus supplement, the prospectus supplement and the prospectus, as well as the relevant terms supplement.

**Underlying:** The index specified in the relevant terms supplement (the “Underlying”).

**Payment at Maturity (for Capped GEARs):** Unless otherwise specified in the relevant terms supplement, for Capped GEARs, the amount you will receive at maturity is based on the Underlying Return, the Upside Gearing and the Maximum Gain, as described below.

If the Underlying Return is positive or zero, you will receive at maturity a cash payment per \$10 in principal amount of the securities equal to:

$\$10 + (\$10 \times \text{the lesser of: (i) (Upside Gearing} \times \text{Underlying Return) and (ii) Maximum Gain})$

If the Underlying Return is negative, your investment will be fully exposed to any decline in the Underlying, and you will lose 1% of the principal amount of your securities for every 1% that the Final Underlying Level declines from the Initial Underlying Level. Under these circumstances, you will receive at maturity a cash payment per \$10 in principal amount of the securities equal to:

$\$10 + (\$10 \times \text{Underlying Return})$

For Capped GEARs, you will lose some or all of your investment at maturity if the Final Underlying Level declines from the Initial Underlying Level.

**Payment at Maturity (for Capped Buffer GEARs):** Unless otherwise specified in the relevant terms supplement, for Capped Buffer GEARs, the amount you will receive at maturity is based on the Underlying Return, the Upside Gearing, the Maximum Gain, the Downside Threshold and the Buffer, as described below.

If the Underlying Return is positive, you will receive at maturity a cash payment per \$10 in principal amount of the securities equal to:

$\$10 + (\$10 \times \text{the lesser of: (i) (Upside Gearing} \times \text{Underlying Return) and (ii) Maximum Gain})$

If the Underlying Return is zero or negative, but the Final Underlying Level is greater than or equal to the Downside Threshold, you will receive at maturity a cash payment of \$10 per \$10 in principal amount of the securities.

If the Underlying Return is negative and the Final Underlying Level is less than the Downside Threshold, your investment will be fully exposed to any decline in the Underlying beyond the Buffer. For every 1% decline of the Underlying beyond the Buffer, you will lose an amount equal to 1% of the principal amount of your securities. As a result, your downside market exposure is buffered against a decline in the level of the Underlying up to the Buffer. Under these circumstances, you will receive at maturity a cash payment per \$10 in principal amount of the securities equal to:

$\$10 + [\$10 \times (\text{Underlying Return} + \text{Buffer})]$

For Capped Buffer GEARs, you will lose some or a substantial portion of your investment at maturity if the Final Underlying Level declines from the Initial Underlying Level by more than the Buffer.

**Payment at Maturity (for Capped Airbag GEARs):** Unless otherwise specified in the relevant terms supplement, for Capped Airbag GEARs, the amount you will receive at maturity is based on the Underlying Return, the Upside Gearing, the Maximum Gain, the Downside Threshold, the Threshold Percentage and the Downside Gearing, as described below.

If the Underlying Return is positive, you will receive at maturity a cash payment per \$10 in principal amount of the securities equal to:

$\$10 + (\$10 \times \text{the lesser of: (i) (Upside Gearing} \times \text{Underlying Return) and (ii) Maximum Gain})$

If the Underlying Return is zero or negative, but the Final Underlying Level is greater than or equal to the Downside Threshold, you will receive at maturity a cash payment of \$10 per \$10 in principal amount of the securities. As a result, your downside market exposure is contingent upon whether the Final Underlying Level is less than the Downside Threshold.

If the Underlying Return is negative and the Final Underlying Level is less than the Downside Threshold, your investment will be fully exposed to any decline in the Underlying. In this case, you will incur a leveraged loss of principal for every 1% by which the Underlying Return is less

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than the Threshold Percentage. Under these circumstances, you will receive at maturity a cash payment per \$10 in principal amount of the securities equal to:

$\$10 + [\$10 \times (\text{Underlying Return} + \text{Threshold Percentage}) \times \text{Downside Gearing}]$

For Capped Airbag GEARS, you will lose some or all of your investment at maturity if the Final Underlying Level is less than the Downside Threshold.

Payment at  
Maturity  
(for Capped  
Trigger  
GEARS):

Unless otherwise specified in the relevant terms supplement, for Capped Trigger GEARS, the amount you will receive at maturity is based on the Underlying Return, the Upside Gearing, the Maximum Gain and the Downside Threshold, as described below.

If the Underlying Return is positive, you will receive at maturity a cash payment per \$10 in principal amount of the securities equal to:

$\$10 + (\$10 \times \text{the lesser of: (i) (Upside Gearing} \times \text{Underlying Return) and (ii) Maximum Gain})$

If the Underlying Return is zero or negative, but the Final Underlying Level is greater than or equal to the Downside Threshold, you will receive at maturity a cash payment of \$10 per \$10 in principal amount of the securities. As a result, your downside market exposure is contingent upon whether the Final Underlying Level is less than the Downside Threshold.

If the Underlying Return is negative and the Final Underlying Level is less than the Downside Threshold, your investment will be fully exposed to any decline in the Underlying. In this case, you will lose 1% of the principal amount of your securities for every 1% that the level of the Underlying declines below the Initial Underlying Level. Under these circumstances, you will receive at maturity a cash payment per \$10 in principal amount of the securities equal to:

$\$10 + (\$10 \times \text{Underlying Return})$

For Capped Trigger GEARS, you will lose some or all of your investment at maturity if the Final Underlying Level is less than the Downside Threshold.

Payment at  
Maturity  
(for Trigger  
In-Step  
Securities):

Unless otherwise specified in the relevant terms supplement, for Trigger In-Step Securities, the amount you will receive at maturity is based on the Underlying Return, the Step Return and the Downside Threshold, as described below.

If the Final Underlying Level is greater than or equal to the Downside Threshold, you will receive at maturity a cash payment per \$10 in principal amount of the securities equal to:

$\$10 + (\$10 \times \text{the greater of: (i) Step Return and (ii) Underlying Return})$

If the Final Underlying Level is less than the Downside Threshold, your investment will be fully exposed to any decline in the Underlying. In this case, you will lose 1% of the principal amount of your securities for every 1% that the level of the Underlying declines below the Initial Underlying Level. As a result, your downside market exposure is contingent upon whether the Final Underlying Level is less than the Downside Threshold. Under these circumstances, you will receive at maturity a cash payment per \$10 in principal amount of the securities equal to:

$\$10 + (\$10 \times \text{Underlying Return})$

For Trigger In-Step Securities, you will lose some or all of your investment at maturity if the Final Underlying Level is less than the Downside Threshold.

Payment at  
Maturity  
(for Capped  
Trigger In-  
Step  
Securities):

Unless otherwise specified in the relevant terms supplement, for Capped Trigger In-Step Securities, the amount you will receive at maturity is based on the Underlying Return, the Step Return, the Maximum Gain and the Downside Threshold, as described below.

If the Final Underlying Level is greater than or equal to the Downside Threshold, you will receive at maturity a cash payment per \$10 in principal amount of the securities equal to:  $\$10 + (\$10 \times \text{the greater of: (i) Step Return and (ii) Underlying Return})$ , subject to the Maximum Gain

If the Final Underlying Level is less than the Downside Threshold, your investment will be fully exposed to any decline in the Underlying. In this case, you will lose 1% of the principal amount of your securities for every 1% that the level of the Underlying declines below the Initial Underlying Level. As a result, your downside market exposure is contingent upon whether the Final Underlying Level is less than the Downside Threshold. Under these circumstances, you will receive at maturity a cash payment per \$10 in principal amount of the securities equal to:  $\$10 + (\$10 \times \text{Underlying Return})$

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For Capped Trigger In-Step Securities, you will lose some or all of your investment at maturity if the Final Underlying Level is less than the Downside Threshold.

Underlying Return:	Unless otherwise specified in the relevant terms supplement: <u>Final Underlying Level – Initial Underlying Level</u> Initial Underlying Level
Maximum Gain:	If applicable, a fixed percentage as specified in the relevant terms supplement.
Upside Gearing:	If applicable, a fixed number as specified in the relevant terms supplement.
Step Return:	If applicable, a fixed percentage as specified in the relevant terms supplement.
Buffer:	If applicable, a fixed percentage as specified in the relevant terms supplement.
Downside Threshold:	If applicable, a fixed level as specified in the relevant terms supplement.
Threshold Percentage:	If applicable, a fixed percentage as specified in the relevant terms supplement.
Downside Gearing:	If applicable, a fixed number as specified in the relevant terms supplement.
Initial Underlying Level:	The Closing Level on the Trade Date or such other date as specified in the relevant terms supplement.
Final Underlying Level:	The Closing Level on the Final Valuation Date.
Final Valuation Date:	The Final Underlying Level will be calculated on a single date, which we refer to as the Final Valuation Date. The Final Valuation Date is subject to postponement in the event of certain market disruption events and as described under “General Terms of the Securities—Payment at Maturity.”
Issue Price:	Unless otherwise specified in the relevant terms supplement, \$10 per \$10 in principal amount of the securities.
Trade Date:	As specified in the relevant terms supplement.
Settlement Date:	As specified in the relevant terms supplement.
Maturity Date:	As specified in the relevant terms supplement. The Maturity Date is subject to postponement in the event of certain market disruption events and as described under “General Terms of the Securities—Payment at Maturity.”

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## RISK FACTORS

An investment in the securities is subject to the risks described below, as well as the risks described under “Risk Factors” in the prospectus and the prospectus supplement. The securities do not pay interest or guarantee any return of principal at, or prior to, maturity. Investing in the securities is not equivalent to investing directly in any of the component securities of the Underlying. In addition, your investment in the securities entails other risks not associated with an investment in conventional debt securities. You should consider carefully the following discussion of risks before you decide that an investment in the securities is suitable for you.

### Risks Relating to the Securities Generally

The securities do not pay interest or guarantee the return of your investment. A decrease in the level of the Underlying may lead to a loss of some or all of your investment at maturity.

The securities do not pay interest and may not return any portion of your investment. The amount payable to you at maturity, if any, will be determined as described in this product prospectus supplement and the relevant terms supplement.

For Capped GEARS, you will lose some or all of your investment at maturity if the Final Underlying Level is less than the Initial Underlying Level, resulting in a loss proportionate to the negative Underlying Return.

For Capped Buffer GEARS, your downside market exposure is buffered against a decline in the Final Underlying Level up to the Buffer; however, you will lose some or a substantial portion of your investment at maturity if the Final Underlying Level is less than the Initial Underlying Level by more than the Buffer, resulting in a loss equal to the negative Underlying Return in excess of the Buffer.

For Capped Airbag GEARS, you will lose some or all of your investment at maturity if the Final Underlying Level is less than the Downside Threshold. In such a case, you will incur a leveraged loss of principal for every 1% by which the Underlying Return is less than the Threshold Percentage.

For Capped Trigger GEARS, Trigger In-Step Securities and Capped Trigger In-Step Securities, you will lose some or all of your investment at maturity if the Final Underlying Level is less than the Downside Threshold. In such a case, you will lose 1% of the principal amount of your securities for each 1% that the Final Underlying Level is less than the Initial Underlying Level.

The securities are subject to the credit risk of Royal Bank of Canada.

The securities are subject to the credit risk of Royal Bank of Canada and our credit ratings and credit spreads may adversely affect the market value of the securities. Investors are dependent on Royal Bank of Canada’s ability to pay all amounts due on the securities at maturity, and therefore investors are subject to our credit risk and to changes in the market’s view of our creditworthiness. Any decline in our credit ratings or increase in the credit spreads charged by the market for taking our credit risk is likely to adversely affect the value of the securities. Payment on the securities, including any repayment of principal, is subject to the creditworthiness of Royal Bank of Canada. If Royal Bank of Canada were to default on its payment obligations, you may not receive any amounts owed to you under the securities and you could lose your entire investment.

If applicable, the appreciation potential of the securities will be limited to the Maximum Gain.

If the securities are subject to a Maximum Gain, the appreciation potential of the securities will be limited to the return represented by that amount. The Maximum Gain will be a percentage that we will determine on the Trade Date and that will be set forth in the relevant terms supplement. Accordingly, if the relevant terms supplement specifies a Maximum Gain, the appreciation potential of the securities will be limited to the return represented by the Maximum Gain, even if the Underlying Return multiplied by the Upside Gearing, would otherwise result in a higher return.

The benefit of any Buffer or Downside Threshold is only available if the securities are held to maturity. Investors should be willing to hold their securities to maturity. If investors are able to sell their securities prior to maturity in the secondary market, they may have to sell them at a loss relative to their initial investment even if the Final Underlying Level has not declined by more than the Buffer, or to a level that is less than the Downside Threshold.

The Upside Gearing only applies at maturity.

Investors should be willing to hold their securities to maturity. If investors are able to sell their securities prior to maturity in the secondary market, the price they receive will likely not reflect the full economic value of the Upside Gearing or the securities themselves, and the return they realize may be less than the Underlying Return even if such return is positive and does not exceed any applicable Maximum Gain. Investors can receive the full benefit of the Upside Gearing and earn the potential Maximum Gain from Royal Bank of Canada only if they hold the securities to maturity.

Your return on the securities may be lower than the return on a conventional debt security of comparable maturity.

The return that you will receive on your securities, which could be negative, may be less than the return you could earn on other investments. Even if your return is positive, your return may be less than the return you would earn if you bought a conventional senior interest bearing debt security of Royal Bank of Canada with the same maturity date or if you invested directly in the securities included in the Underlying. Your investment may not reflect the full opportunity cost to you when you take into account factors that affect the time value of money.

If the securities are linked to an Underlying that is not a total return index, your return on the securities will not reflect dividends on the equity securities included in the Underlying.

Your return on the securities will not reflect the return you would realize if you actually owned the equity securities included in the Underlying and received the dividends paid on those equity securities. This is because the calculation agent will calculate the amount payable to you at maturity of the securities by reference to the Final Underlying Level. The Final Underlying Level reflects the prices of the equity securities included in the Underlying as calculated in the manner required by the applicable Underlying, on the Final Valuation Date without taking into consideration the value of any dividends paid on those equity securities.

Secondary trading may be limited.

Unless otherwise specified in the relevant terms supplement, the securities will not be listed on a securities exchange. There may be little or no secondary market for the securities. Even if there is a secondary market, it may not provide enough liquidity to allow you to trade or sell the securities easily.

RBCCM, may act as a market maker for the securities, but is not required to do so. Because we do not expect that other market makers will participate significantly in the secondary market for the securities, the price at which you may be able to trade your securities is likely to depend on the price, if any, at which RBCCM is willing to buy the securities. If at any time RBCCM or another Agent does not act as a market maker, it is likely that there would be little or no secondary market for the securities. We expect that transaction costs in any secondary market would be high. As a result, the difference between the bid and asked prices for your securities in any secondary market could be substantial. If you sell your securities before maturity, you may have to do so at a substantial discount from the issue price, and as a result, you may suffer substantial losses.

The Final Underlying Level may be less than the Closing Level of the Underlying at other times during the term of the securities.

Because the Final Underlying Level is calculated based on the Closing Level of the Underlying on the Final Valuation Date, the level of the Underlying at the maturity date or at other times during the term of the securities, including dates near the Final Valuation Date, could be higher than the Final Underlying

Level. This difference could be particularly large if there is a significant increase in the level of the Underlying after the Final Valuation Date, or if there is a significant decrease in the level of the Underlying around the time of the Final Valuation Date, or if there is significant volatility in the Underlying level during the term of the securities (especially on dates near the Final Valuation Date). For example, if the Closing Levels of the Underlying increase or remain relatively constant during the initial term of the securities and then decrease below the Initial Underlying Level on the Final Valuation Date, then the Final Underlying Level may be significantly less than if it were calculated on a date earlier than the Final Valuation Date. Under these circumstances, you may receive a lower payment at maturity than you would have received if you had invested in the equity securities included in the Underlying.

The securities are not designed to be short-term trading instruments.

The price at which you will be able to sell your securities to us or our affiliates prior to maturity, if at all, may be at a substantial discount from the principal amount of the securities, even in cases where the level of the Underlying has appreciated since the Trade Date. The potential returns described in the relevant terms supplement assume that your securities, which are not designed to be short-term trading instruments, are held to maturity.

Prior to maturity, the value of the securities will be influenced by many unpredictable factors.

Many economic and market factors will influence the value of the securities. We expect that, generally, the level of the Underlying on any day will affect the value of the securities more than any other single factor. However, you should not expect the value of the securities in the secondary market to vary in proportion to changes in the level of the Underlying. The value of the securities will be affected by a number of other factors that may either offset or magnify each other, including:

- the level of the Underlying;
- the expected volatility of the Underlying;
- the time to maturity of the securities;
- the dividend rate on the equity securities included in the Underlying;
- interest and yield rates in the market generally, as well as in the markets of the equity securities included in the Underlying;
- economic, financial, political, regulatory or judicial events that affect the equity securities included in the Underlying or stock markets generally and which may affect the Closing Level on the Final Valuation Date;
- for securities linked to a foreign index, the exchange rate and the volatility of the exchange rate between the U.S. dollar and the currencies in which the equity securities included in the Underlying are traded, and, if the Underlying is calculated in one currency and the equity securities included in the Underlying are traded in another currency or currencies, the correlation between those rates and the level of the Underlying; and
- our creditworthiness, including actual or anticipated downgrades in our credit ratings.

Some or all of these factors will influence the price you will receive if you choose to sell your securities prior to maturity. The impact of any of the factors set forth above may enhance or offset some or all of any change resulting from another factor or factors. You may have to sell your securities at a substantial discount from the principal amount if the level of the Underlying at that time is at, below or not sufficiently above the Initial Underlying Level. You cannot predict the future performance of the Underlying based on its historical performance. The level of the Underlying may decrease such that you may not receive any return of your investment, subject to any Buffer. For Capped GEARS, if the Underlying Return is negative, you will lose some or all of your investment at maturity. For Capped Buffer GEARS, if the Final Underlying Level decreases compared to the Initial Underlying Level by more than the Buffer, you will lose some or a substantial portion of your investment at maturity. For Capped Airbag GEARS, Capped Trigger GEARS, Trigger In-

Step Securities or Capped Trigger In-Step Securities, if the Final Underlying Level is less than the Downside Threshold, you will lose some or all of your investment at maturity. There can be no assurance that the level of the Underlying will not decrease so that at maturity you will not lose some or all of your investment.

If the level of the Underlying changes, the market value of your securities may not change in the same manner. Owning the securities is not the same as owning the securities included in the Underlying. Accordingly, changes in the level of the Underlying may not result in a comparable change of the market value of the securities. If the level of the Underlying on any trading day increases above the Initial Underlying Level, the value of the securities may not increase in a comparable manner, if at all. It is possible for the level of the Underlying to increase while the value of the securities declines.

The inclusion in the original issue price of each agent's commission and the estimated cost of hedging our obligations under the securities through one or more of our affiliates is likely to adversely affect the value of the securities prior to maturity.

While the payment at maturity, if any, will be based on the full principal amount of your securities as described in the relevant terms supplement, the original issue price of the securities includes each agent's commission and the estimated cost of hedging our obligations under the securities through one or more of our affiliates. Such estimated cost includes our affiliates' expected cost of providing such hedge, as well as the profit our affiliates expect to realize in consideration for assuming the risks inherent in providing such hedge. As a result, assuming no change in market conditions or any other relevant factors, the price, if any, at which RBCCM may be willing to purchase securities from you in secondary market transactions, if at all, will likely be lower than the original issue price. In addition, any such prices may differ from values determined by pricing models used by RBCCM, as a result of such compensation or other transaction costs.

You will have no shareholder rights in issuers of equity securities that are included in the Underlying.

As a holder of the securities, you will not have voting rights or rights to receive dividends or other distributions or other rights that holders of the equity securities included in the Underlying would have.

You must rely on your own evaluation of the merits of an investment linked to the Underlying.

In the ordinary course of their business, our affiliates may have expressed views on expected movements in any Underlying or its components, and may do so in the future. These views or reports may be communicated to our clients and clients of our affiliates. However, these views are subject to change from time to time. Moreover, other professionals who transact business in markets relating to any Underlying or its components may at any time have significantly different views from those of our affiliates. For these reasons, you are encouraged to derive information concerning the applicable Underlying or its components from multiple sources, and you should not rely solely on views expressed by our affiliates.

We or our affiliates may have adverse economic interests to the holders of the securities.

RBCCM and other affiliates of ours trade the equity securities included in the Underlying and other financial instruments related to the Underlying and its component securities on a regular basis, for their accounts and for other accounts under their management. RBCCM and these affiliates may also issue or underwrite or assist unaffiliated entities in the issuance or underwriting of other securities or financial instruments linked to the Underlying or its component securities. To the extent that we or one of our affiliates serves as issuer, agent or underwriter for such securities or financial instruments, our or their interests with respect to such products may be adverse to those of the holders of the securities. Any of these trading activities could potentially affect the level of the Underlying and, accordingly, could affect the value of the securities and the amount, if any, payable to you at maturity.

We or our affiliates may currently or from time to time engage in business with companies that have equity securities included in the Underlying, including extending loans to, or making equity investments in, or providing advisory services to them, including merger and acquisition advisory services. In the course of this business, we or our affiliates may acquire non-public information about these companies, and we will not disclose any such information to you. We do not make any representation or warranty to any purchaser of a security with respect to any matters whatsoever relating to our business with these or future price movements of the equity securities included in the Underlying.

Additionally, we or one of our affiliates may serve as issuer, agent or underwriter for additional issuances of securities with returns linked or related to changes in the level of the Underlying or the prices of the equity securities that are included in the Underlying. By introducing competing products into the marketplace in this manner, we or one or more of our affiliates could adversely affect the value of the securities.

We may hedge our obligations under the securities through certain affiliates, who would expect to make a profit on such hedge. We or our affiliates may adjust these hedges by, among other things, purchasing or selling those assets at any time, which could have an impact on the Underlying Return, and therefore, on the return of your securities.

Because hedging our obligations entails risk and may be influenced by market forces beyond our or our affiliates' control, such hedging may result in a profit that is more or less than expected, or it may result in a loss.

We or one of our affiliates may currently or from time to time engage in trading activities related to the currencies in which the equity securities included in a foreign index are denominated. These trading activities could potentially affect the exchange rates with respect to such currencies and, if currency exchange rate calculations are involved in the calculation of the Closing Levels of that foreign index, could affect the Closing Levels of that foreign index and, accordingly, if the securities are linked to that foreign index, the value of the securities.

In the course of our or our affiliates' currency trading activities, we or our affiliates may acquire material nonpublic information with respect to currency exchange rates, and we will not disclose any such information to you. In addition, one or more of our affiliates may produce and/or publish research reports, or otherwise express views, with respect to expected movements in currency exchange rates. We do not make any representation or warranty to any purchaser of securities with respect to any matters whatsoever relating to future currency exchange rate movements and, if the securities are linked to a foreign index, any prospective purchaser of the securities should undertake an independent investigation of the currencies in which equity securities included in that foreign index are denominated and their related exchange rates as, in its judgment, is appropriate to make an informed decision with respect to an investment in the securities.

Market disruptions may adversely affect your return.

The calculation agent may, in its sole discretion, determine that the markets have been affected in a manner that prevents it from properly determining the Closing Level of the Underlying on the Final Valuation Date and the Underlying Return and calculating the amount that we are required to pay you, if any, at maturity. These events may include disruptions or suspensions of trading in the markets as a whole. If the calculation agent, in its sole discretion, determines that any of these events prevents us or any of our affiliates from properly hedging our obligations under the securities, it is possible that the Final Valuation Date and the maturity date will be postponed and your return will be adversely affected. See "General Terms of the Securities—Market Disruption Events."

There are potential conflicts of interest between you and the calculation agent.

The calculation agent will, among other things, determine the amount of your payment at maturity on the securities. Our wholly-owned subsidiary, RBCCM, will serve as the calculation agent. We may change the calculation agent after the original issue date without notice to you. The calculation agent will exercise its judgment when performing its functions. For example, the calculation agent may have to determine whether a market disruption event affecting the Underlying has occurred. This determination may, in turn, depend on the calculation agent's judgment whether the event has materially interfered with

our ability or the ability of one of our affiliates to unwind our hedge positions. Since this determination by the calculation agent will affect the payment at maturity on the securities, the calculation agent may have a conflict of interest if it needs to make a determination of this kind.

Non-U.S. investors may be subject to certain additional risks.

This product prospectus supplement contains a general description of certain U.S. tax considerations relating to the securities. In the event you are a non-U.S. investor, you should consult your tax advisors as to the consequences, under the tax laws of the country where you are resident for tax purposes, of acquiring, holding and disposing of the securities and receiving the payments that might be due under the securities.

For a discussion of the Canadian federal income tax consequences of investing in the securities, please see “Tax Consequences—Canadian Taxation” in the accompanying prospectus. If you are not a Non-resident Holder (as that term is defined in “Tax Consequences—Canadian Taxation” in the accompanying prospectus) or if you acquire the securities in the secondary market, you should consult your tax advisors as to the consequences of acquiring, holding and disposing of the securities and receiving the payments that may be due under the securities.

Significant aspects of the income tax treatment of an investment in the securities may be uncertain.

The tax treatment of an investment in the securities is uncertain. We do not plan to request a ruling from the Internal Revenue Service or the Canada Revenue Agency regarding the tax treatment of an investment in the securities, and the Internal Revenue Service, the Canada Revenue Agency or a court may not agree with the tax treatment described in this product prospectus supplement.

The Internal Revenue Service has issued a notice indicating that it and the U.S. Treasury Department are actively considering whether, among other issues, a holder should be required to accrue interest over the term of an instrument such as the securities even though that holder will not receive any payments with respect to the securities until maturity and whether all or part of the gain a holder may recognize upon sale or maturity of an instrument such as the securities should be treated as ordinary income. The outcome of this process is uncertain and could apply on a retroactive basis.

Please read carefully the sections entitled “Supplemental Discussion of U.S. Federal Income Tax Consequences” in this product prospectus supplement, the section “Tax Consequences” in the accompanying prospectus and the section entitled “Certain Income Tax Consequences” in the accompanying prospectus supplement. You should consult your tax advisor about your own tax situation.

For a more complete discussion of the Canadian federal income tax consequences of investing in the securities, please see “Tax Consequences—Canadian Taxation” in the accompanying prospectus. If you are not a Non-resident Holder (as that term is defined in “Tax Consequences—Canadian Taxation” in the accompanying prospectus) or if you acquire the securities in the secondary market, you should consult your tax advisors as to the consequences of acquiring, holding and disposing of the securities and receiving the payments that might be due under the securities.

#### Risks Relating to the Underlying

The sponsor of the Underlying (the “Index Sponsor”) may adjust the Underlying in a way that affects its level, and the Index Sponsor has no obligation to consider your interests.

The applicable Index Sponsor is responsible for calculating and maintaining the Underlying. The Index Sponsor can add, delete or substitute the equity securities included in the Underlying or make other methodological changes that could change the level of the Underlying. You should realize that the changing of equity securities included in the Underlying may affect the level of the Underlying, as a newly added equity security may perform significantly better or worse than the equity security or securities it replaces. Additionally, the applicable Index Sponsor may alter, discontinue or suspend calculation or dissemination of the Underlying. Any of these actions could adversely affect the value of the securities.

The applicable Index Sponsor has no obligation to consider your interests in calculating or revising the Underlying. Unless otherwise specified in the relevant terms supplement, to our knowledge, we are not currently affiliated with any company the equity securities of which are included in the Underlying.

To our knowledge, we are not currently affiliated with any issuers the equity securities of which are included in the Underlying. As a result, we will have no ability to control the actions of the issuers of such equity securities, including actions that could affect the value of the equity securities included in the Underlying or your securities. None of the money you pay us will be paid to the Index Sponsor for the Underlying or any of the issuers of the equity securities included in the Underlying and none of those issuers will be involved in the offering of the securities in any way. Neither those issuers nor we will have any obligation to consider your interests as a holder of the securities in taking any actions that might affect the value of your securities.

For securities linked to a foreign index, if the prices of its component securities are not converted into U.S. dollars for purposes of calculating the level of that index, the Underlying Return for the securities will not be adjusted for changes in exchange rates that might affect the Underlying.

Because the prices of the equity securities comprising such index are not converted into U.S. dollars for purposes of calculating the level of the Underlying and although the equity securities included in the Underlying are traded in currencies other than U.S. dollars, and the securities, which are linked to the Underlying, are denominated in U.S. dollars, the amount payable on the securities at maturity will not be adjusted for changes in the exchange rate between the U.S. dollar and each of the currencies in which the equity securities included in the Underlying are denominated. Changes in exchange rates, however, may reflect changes in various non-U.S. economies that in turn may affect the Underlying Return for the securities. The amount we pay in respect of the securities on the maturity date, if any, will be determined solely in accordance with the procedures described in “General Terms of the Securities—Payment at Maturity.”

For securities linked to a foreign index, if the prices of its component securities are converted into U.S. dollars for purposes of calculating the level of that index, the securities will be subject to currency exchange risk.

Because the prices of the equity securities included in such index are converted into U.S. dollars for the purposes of calculating the level of the Underlying, the holders of the securities will be exposed to currency exchange rate risk with respect to each of the currencies in which the equity securities included in the Underlying trade. An investor’s net exposure will depend on the extent to which such currencies strengthen or weaken against the U.S. dollar and the relative weight of the equity securities included in the Underlying denominated in each such currency. If, taking into account such weighting, the U.S. dollar strengthens against such currencies, the level of the Underlying will be adversely affected and the payment at maturity of the securities may be reduced.

Of particular importance to potential currency exchange risk are:

- existing and expected rates of inflation;
- existing and expected interest rate levels;
- the balance of payments; and
- the extent of governmental surpluses or deficits in the component countries and the United States.

All of these factors are in turn sensitive to the monetary, fiscal and trade policies pursued by the governments of various component countries and the United States and other countries important to international trade and finance.

For securities linked to a foreign index, if the prices of its component securities are converted into U.S. dollars for purposes of calculating the level of that index, changes in the volatility of

exchange rates, and the correlation between those rates and the level of the Underlying are likely to affect the market value of the securities.

The exchange rate between the U.S. dollar and each of the currencies in which the equity securities included in such index are denominated refers to a foreign exchange spot rate that measures the relative values of two currencies — the particular currency in which an equity security included in the Underlying and the U.S. dollar. This exchange rate reflects the amount of the particular currency in which an equity security included in the Underlying is denominated that can be purchased for one U.S. dollar and thus increases when the U.S. dollar appreciates relative to the particular currency upon which that equity security is denominated. The volatility of the exchange rate between the U.S. dollar and each of the currencies in which the equity securities included in the Underlying refers to the size and frequency of changes in that exchange rate.

Because the Underlying may be calculated, in part, by converting the closing prices of the equity securities included in the Underlying into U.S. dollars, the volatility of the exchange rate between the U.S. dollar and each of the currencies in which those equity securities are denominated could affect the market value of the securities.

The correlation of the exchange rate between the U.S. dollar and each of the currencies in which the equity securities included in the Underlying are denominated and the level of the Underlying refer to the relationship between the percentage changes in that exchange rate and the percentage changes in the level of the Underlying. The direction of the correlation (whether positive or negative) and the extent of the correlation between the percentage changes in the exchange rate between the U.S. dollar and each of the currencies in which the equity securities included in the Underlying are denominated and the percentage changes in the level of the Underlying could affect the value of the securities.

For securities linked to a foreign index, an investment in the securities is subject to risks associated with non-U.S. securities markets.

All or a substantial portion of the equity securities that are included in a foreign index have been issued by non-U.S. companies. Investments in securities linked to the value of such non-U.S. equity securities involve risks associated with the securities markets in those countries, including risks of volatility in those markets, governmental intervention in those markets and cross shareholdings in companies in certain countries. Also, there is generally less publicly available information about companies in some of these jurisdictions than about U.S. companies that are subject to the reporting requirements of the Securities and Exchange Commission (the “SEC”), and generally, non-U.S. companies are subject to accounting, auditing and financial reporting standards and requirements and securities trading rules different from those applicable to U.S. reporting companies.

The prices of securities in non-U.S. jurisdictions may be affected by political, economic, financial and social factors in such markets, including changes in a country’s government, economic and fiscal policies, currency exchange laws and other foreign laws or restrictions. Moreover, the economies in such countries may differ favorably or unfavorably from the economy of the United States in such respects as growth of gross national product, rate of inflation, capital reinvestment, resources and self sufficiency. Such countries may be subjected to different and, in some cases, more adverse economic environments.

The economies of emerging market countries in particular face several concerns, including the relatively unstable governments which may present the risks of nationalization of businesses, restrictions on foreign ownership and prohibitions on the repatriation of assets, and which may have less protection of property rights than more developed countries. These economies may also be based on only a few industries, be highly vulnerable to changes in local and global trade conditions and may suffer from extreme and volatile debt burdens or inflation rates. In addition, local securities markets may trade a small number of securities and may be unable to respond effectively to increases in trading volume, potentially making prompt liquidation of holdings difficult or impossible at times. The risks of the economies of emerging market countries are relevant for securities linked to a foreign index that includes securities traded in one or more emerging market countries.



Some or all of these factors may influence the Closing Level of the Underlying. The impact of any of the factors set forth above may enhance or offset some or all of any change resulting from another factor or factors. You cannot predict the future performance of the Underlying based on their historical performance. The level of the Underlying may decrease such that you may not receive any return of your investment. There can be no assurance that the Closing Level will not decrease so that at maturity you will not lose some or all of your investment.

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## USE OF PROCEEDS AND HEDGING

Unless otherwise specified in the relevant terms supplement, the net proceeds we receive from the sale of the securities will be used for general corporate purposes and, in part, by us or by one or more of our affiliates in connection with hedging our obligations under the securities. The original issue price of the securities includes each agent's commissions (as shown on the cover page of the relevant terms supplement) paid with respect to the securities and the estimated cost of hedging our obligations under the securities.

Unless otherwise specified in the relevant terms supplement, the original issue price of the securities will include the reimbursement of certain issuance costs and the estimated cost of hedging our obligations under the securities.

Because hedging our obligations entails risk and may be influenced by market forces beyond our or our affiliates' control, the actual cost of such hedging may result in a profit that is more or less than expected, or could result in a loss. See also "Use of Proceeds" in the accompanying prospectus.

In anticipation of the sale of the securities, we expect to enter into hedging transactions with one or more of our affiliates, or with one or more of the Agents or their affiliates, involving purchases of securities included in or linked to the Underlying and/or listed and/or over-the-counter derivative instruments linked to the Underlying prior to or on the pricing date. From time to time, we, the Agents, and our respective affiliates may enter into additional hedging transactions or unwind those that we or they have entered into. In this regard, we, the Agents, and our respective affiliates may:

- acquire or dispose of investments relating to the Underlying;
- acquire or dispose of long or short positions in listed or over-the-counter derivative instruments based on the level of the Underlying or the price of the Underlying components; or
- any combination of the above two.

We, the Agents, and our respective affiliates may acquire a long or short position in securities similar to the securities from time to time and may, in our or their sole discretion, hold or resell those similar securities.

We, the Agents and our respective affiliates may close out our or their hedges on or before the Final Valuation Date. That step may involve sales or purchases of the components of the Underlying or over-the-counter derivative instruments linked to the Underlying.

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## GENERAL TERMS OF THE SECURITIES

The following description of the terms of the securities supplements the description of the general terms of the debt securities set forth under the headings “Description of the Notes We May Offer” in the accompanying prospectus supplement and “Description of Debt Securities” in the accompanying prospectus. A separate terms supplement will describe the terms that apply specifically to the securities, including any changes to the terms specified below. Capitalized terms used but not defined in this product prospectus supplement have the meanings assigned in the accompanying prospectus supplement, prospectus and the relevant terms supplement. The term “security” refers to \$10 in principal amount of the securities.

### General

The securities are senior unsecured debt obligations of Royal Bank of Canada that are linked to an equity index (the “Underlying”) specified in the relevant terms supplement. The securities will be issued by Royal Bank of Canada under an indenture dated October 23, 2003, as it may be amended or supplemented from time to time, between us and The Bank of New York Mellon (as successor to JPMorgan Chase Bank, N.A.), as trustee.

The securities do not pay interest and do not guarantee any return of principal at, or prior to, maturity. At maturity the securities will return a payment in cash, the amount of which will vary depending on the performance of the Underlying, calculated in accordance with the applicable formula set forth below, and whether the securities have certain of the terms and provisions that are described in more detail below. The securities do not guarantee any return of your investment at maturity. Any payment on the securities, including any repayment of principal, is subject to the creditworthiness of Royal Bank of Canada.

The securities are unsecured debt obligations and are not savings accounts or deposits of a bank. The securities are not insured or guaranteed by the Canada Deposit Insurance Corporation, the U.S. Federal Deposit Insurance Corporation, or any other governmental agency of Canada or the United States.

The securities are our unsecured and unsubordinated obligations and will rank *pari passu* with all of our other unsecured and unsubordinated obligations.

The securities will be issued in denominations specified in the relevant terms supplement. The securities will be represented by one or more permanent global securities registered in the name of The Depository Trust Company, or DTC, or its nominee, as described under “Description of Debt Securities—Ownership and Book-Entry Issuance” and “—Considerations Relating to DTC” in the prospectus.

The specific terms of the securities will be described in the relevant terms supplement accompanying this product prospectus supplement. The terms described in that document supplement those described herein, the accompanying prospectus and prospectus supplement. If the terms described in the relevant terms supplement are inconsistent with those described herein, the accompanying prospectus or prospectus supplement, the terms described in the relevant terms supplement will control.

All references to the “debt securities” in the accompanying prospectus and all references to the “notes” in the accompanying prospectus supplement shall be read as and shall apply to the “securities” for the purpose of this product prospectus supplement. Unless the context otherwise requires, references to the “debt securities,” “notes” and the “securities” in the prospectus, prospectus supplement and this product prospectus supplement can be read interchangeably and are synonymous.

### Payment at Maturity

The maturity date for the securities will be set forth in the relevant terms supplement and is subject to adjustment if such day is not a business day or if the Final Valuation Date is postponed as described

below. We will also specify in the relevant terms supplement whether or not the securities have certain of the terms and provisions that are described in more detail below.

#### Capped GEARS

Unless otherwise specified in the relevant terms supplement, for Capped GEARS, the amount you will receive at maturity is based on the Underlying Return, the Upside Gearing and the Maximum Gain, as described below.

If the Underlying Return is positive or zero, you will receive at maturity a cash payment per \$10 in principal amount of the securities equal to:

$\$10 + (\$10 \times \text{the lesser of: (i) (Upside Gearing} \times \text{Underlying Return) and (ii) Maximum Gain})$

If the Underlying Return is negative, your investment will be fully exposed to any decrease in the Underlying, and you will lose 1% of the principal amount of your securities for every 1% that the Final Underlying Level declines from the Initial Underlying Level. Under these circumstances, you will receive at maturity a cash payment per \$10 in principal amount of the securities equal to:

$\$10 + (\$10 \times \text{Underlying Return})$

For Capped GEARS, you will lose some or all of your investment at maturity if the Final Underlying Level declines from the Initial Underlying Level, resulting in a loss proportionate to the negative Underlying Return.

#### Capped Buffer GEARS

Unless otherwise specified in the relevant terms supplement, for Capped Buffer GEARS, the amount you will receive at maturity is based on the Underlying Return, the Upside Gearing, the Maximum Gain, the Downside Threshold and the Buffer, as described below.

If the Underlying Return is positive, you will receive at maturity a cash payment per \$10 in principal amount of the securities equal to:

$\$10 + (\$10 \times \text{the lesser of: (i) (Upside Gearing} \times \text{Underlying Return) and (ii) Maximum Gain})$

If the Underlying Return is zero or negative, but the Final Underlying Level is greater than or equal to the Downside Threshold, you will receive at maturity a cash payment of \$10 per \$10 in principal amount of the securities.

If the Underlying Return is negative and the Final Underlying Level is less than the Downside Threshold, your investment will be fully exposed to any decline in the Underlying beyond the Buffer. For every 1% decline of the Underlying beyond the Buffer, you will lose an amount equal to 1% of the principal amount of your securities. As a result, your downside market exposure is buffered against a decline in the level of the Underlying up to the Buffer. Under these circumstances, you will receive at maturity a cash payment per \$10 in principal amount of the securities equal to:

$\$10 + [(\$10 \times (\text{Underlying Return} + \text{Buffer}))]$

For Capped Buffer GEARS, you will lose some or a substantial portion of your investment at maturity if the Final Underlying Level decreases from the Initial Underlying Level by more than the Buffer, resulting in a loss equal to the negative Underlying Return in excess of the Buffer.

### Capped Airbag GEARS

Unless otherwise specified in the relevant terms supplement, for Capped Airbag GEARS, the amount you will receive at maturity is based on the Underlying Return, the Upside Gearing, the Maximum Gain, the Downside Threshold, the Threshold Percentage and the Downside Gearing, as described below.

If the Underlying Return is positive, you will receive at maturity a cash payment per \$10 in principal amount of the securities equal to:

$\$10 + (\$10 \times \text{the lesser of: (i) (Upside Gearing} \times \text{Underlying Return) and (ii) Maximum Gain})$

If the Underlying Return is zero or negative, but the Final Underlying Level is greater than or equal to the Downside Threshold, you will receive at maturity a cash payment of \$10 per \$10 in principal amount of the securities. As a result, your downside market exposure is contingent upon whether the Final Underlying Level is less than the Downside Threshold.

If the Underlying Return is negative and the Final Underlying Level is less than the Downside Threshold, your investment will be fully exposed to any decline in the Underlying. In this case, you will incur a leveraged loss of principal for every 1% by which the Underlying Return is less than the Threshold Percentage. Under these circumstances, you will receive at maturity a cash payment per \$10 in principal amount of the securities equal to:

$\$10 + [\$10 \times (\text{Underlying Return} + \text{Threshold Percentage}) \times \text{Downside Gearing}]$

For Capped Airbag GEARS, you will incur a leveraged loss of principal for every 1% by which the Underlying Return is less than the Threshold Percentage. You will lose some or all of your investment at maturity if the Final Underlying Level is less than the Downside Threshold.

### Capped Trigger GEARS

Unless otherwise specified in the relevant terms supplement, for Capped Trigger GEARS, the amount you will receive at maturity is based on the Underlying Return, the Upside Gearing, the Maximum Gain and the Downside Threshold, as described below.

If the Underlying Return is positive, you will receive at maturity a cash payment per \$10 in principal amount of the securities equal to:

$\$10 + (\$10 \times \text{the lesser of: (i) (Upside Gearing} \times \text{Underlying Return) and (ii) Maximum Gain})$

If the Underlying Return is zero or negative, but the Final Underlying Level is greater than or equal to the Downside Threshold, you will receive at maturity a cash payment of \$10 per \$10 in principal amount of the securities. As a result, your downside market exposure is contingent upon whether the Final Underlying Level is less than the Downside Threshold.

If the Underlying Return is negative and the Final Underlying Level is less than the Downside Threshold, your investment will be fully exposed to any decline in the Underlying. In this case, you will lose 1% of the principal amount of your securities for every 1% that the level of the Underlying declines below the Initial Underlying Level. Under these circumstances, you will receive at maturity a cash payment per \$10 in principal amount of the securities equal to:

$\$10 + (\$10 \times \text{Underlying Return})$

For Capped Trigger GEARS, you will lose some or all of your investment at maturity if the Final Underlying Level is less than the Downside Threshold.

### Trigger In-Step Securities

Unless otherwise specified in the relevant terms supplement, for Trigger In-Step Securities, the amount you will receive at maturity is based on the Underlying Return, the Step Return and the Downside Threshold, as described below.

If the Final Underlying Level is greater than or equal to the Downside Threshold, you will receive at maturity a cash payment per \$10 in principal amount of the securities equal to:

$\$10 + (\$10 \times \text{the greater of: (i) Step Return and (ii) Underlying Return})$

If the Final Underlying Level is less than the Downside Threshold, your investment will be fully exposed to any decline in the Underlying. In this case, you will lose 1% of the principal amount of your securities for every 1% that the level of the Underlying declines below the Initial Underlying Level. As a result, your downside market exposure is contingent upon whether the Final Underlying Level is less than the Downside Threshold. Under these circumstances, you will receive at maturity a cash payment per \$10 in principal amount of the securities equal to:

$\$10 + (\$10 \times \text{Underlying Return})$

For Trigger In-Step Securities, you will lose some or all of your investment at maturity if the Final Underlying Level is less than the Downside Threshold.

### Capped Trigger In-Step Securities

Unless otherwise specified in the relevant terms supplement, for Trigger In-Step Securities, the amount you will receive at maturity is based on the Underlying Return, the Step Return, the Maximum Gain and the Downside Threshold, as described below.

If the Final Underlying Level is greater than or equal to the Downside Threshold, you will receive at maturity a cash payment per \$10 in principal amount of the securities equal to:

$\$10 + (\$10 \times \text{the greater of: (i) Step Return and (ii) Underlying Return})$ , subject to the Maximum Gain

If the Final Underlying Level is less than the Downside Threshold, your investment will be fully exposed to any decline in the Underlying. In this case, you will lose 1% of the principal amount of your securities for every 1% that the level of the Underlying declines below the Initial Underlying Level. As a result, your downside market exposure is contingent upon whether the Final Underlying Level is less than the Downside Threshold. Under these circumstances, you will receive at maturity a cash payment per \$10 in principal amount of the securities equal to:

$\$10 + (\$10 \times \text{Underlying Return})$

For Capped Trigger In-Step Securities, you will lose some or all of your investment at maturity if the Final Underlying Level is less than the Downside Threshold.

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The "Maximum Gain," if applicable, is a fixed percentage as specified in the relevant terms supplement.

The "Upside Gearing," if applicable, is a fixed number as specified in the relevant terms supplement.

The "Step Return," if applicable, is a fixed percentage as specified in the relevant terms supplement.

The "Buffer," if applicable, is a fixed percentage as specified in the relevant terms supplement.

The “Downside Threshold,” if applicable, is a fixed level as specified in the relevant terms supplement.

The “Threshold Percentage,” if applicable, is a fixed percentage as specified in the relevant terms supplement.

The “Downside Gearing,” if applicable, is a fixed number as specified in the relevant terms supplement.

The “Trade Date” is the day on which we price the securities for initial sale to the public and will be specified in the relevant terms supplement.

The “Settlement Date” is the day on which we issue the securities for initial delivery to investors and will be specified in the relevant terms supplement.

Unless otherwise specified in the relevant terms supplement, the “Underlying Return,” as calculated by the calculation agent, is the percentage change in the Closing Level calculated by comparing the Final Underlying Level to the Initial Underlying Level. The relevant terms supplement will specify the manner in which the Initial Underlying Level and the Final Underlying Level will be determined. The Underlying Return, unless otherwise specified in the relevant terms supplement, is calculated as follows:

$$\text{Underlying Return} = \frac{\text{Final Underlying Level} - \text{Initial Underlying Level}}{\text{Initial Underlying Level}}$$

Return =  $\frac{\text{Final Underlying Level} - \text{Initial Underlying Level}}{\text{Initial Underlying Level}}$

Unless otherwise specified in the relevant terms supplement, the “Initial Underlying Level” means the Closing Level of the Underlying on the Trade Date or such other date as specified in the relevant terms supplement.

Unless otherwise specified in the relevant terms supplement, the “Final Underlying Level” means the Closing Level of the Underlying on the Final Valuation Date.

The “Closing Level” of the Underlying on any trading day will equal the closing level of the Underlying or any successor index thereto published following the regular official weekday close of trading on that trading day. In certain circumstances, the “Closing Level” will be based on the alternative calculation of the Underlying described under “—Discontinuation of the Underlying; Alteration of Method of Calculation” below.

A “trading day” is, unless otherwise specified in the relevant terms supplement, a day, as determined by the calculation agent, on which trading is generally conducted on (i) the relevant exchanges (as defined below) for securities included in the Underlying or the successor index and (ii) the exchanges on which futures or options contracts related to the Underlying or the successor index are traded, other than a day on which trading on such relevant exchange or exchange on which such futures or options contracts are traded is scheduled to close prior to its regular weekday closing time.

The Final Valuation Date will be specified in the relevant terms supplement and any such date is subject to adjustment as described below. If the Final Valuation Date is not a trading day or if there is a market disruption event on such day, the applicable Final Valuation Date will be postponed to the immediately succeeding trading day during which no market disruption event shall have occurred or be continuing. In no event, however, will the Final Valuation Date be postponed more than ten business days following the date originally scheduled to be that Final Valuation Date. If the tenth business day following the date originally scheduled to be the applicable Final Valuation Date is not a trading day, or if there is a market disruption event on that date, the calculation agent will determine the Closing Level of the Underlying for that Final Valuation Date on such date in accordance with the formula for and method of calculating the Closing Level last in effect prior to commencement of the market disruption event (or prior to the non-trading day), using the closing price (or, if trading in the relevant securities has been materially suspended or materially limited, the calculation agent’s good faith estimate of the closing price

that would have prevailed but for such suspension or limitation or non-trading day) on that tenth scheduled business day of each security most recently constituting the Underlying.

The maturity date will be specified in the relevant terms supplement and is subject to adjustment as described below. If the scheduled maturity date (as specified in the relevant terms supplement) is not a business day, then the maturity date will be the next succeeding business day following the scheduled maturity date. If, due to a market disruption event or otherwise, the Final Valuation Date is postponed so that it falls less than three business days prior to the scheduled maturity date, the maturity date will be the third business day following the Final Valuation Date, as postponed, unless otherwise specified in the relevant terms supplement. We describe market disruption events under “—Market Disruption Events.”

We will irrevocably deposit with DTC no later than the opening of business on the applicable date funds sufficient to make payments of the amount payable, if any, with respect to the securities on such date. We will give DTC irrevocable instructions and authority to pay such amount to the holders of the securities entitled thereto.

A “business day” is, unless otherwise specified in the relevant terms supplement, any day other than a day on which banking institutions in The City of New York are authorized or required by law, regulation or executive order to close or a day on which transactions in dollars are not conducted.

Subject to the foregoing and to applicable law (including, without limitation, U.S. federal laws), we or our affiliates may, at any time and from time to time, purchase outstanding securities by tender, in the open market or by private agreement.

#### Calculation Agent

RBCCM will act as the calculation agent. The calculation agent will determine, among other things, the Initial Underlying Level, the Downside Threshold, if applicable, the Final Underlying Level, the Underlying Return and the payment at maturity, if any, on the securities. In addition, the calculation agent will determine whether there has been a market disruption event or a discontinuation of the Underlying and whether there has been a material change in the method of calculating the Underlying. All determinations made by the calculation agent will be at the sole discretion of the calculation agent and will, in the absence of manifest error, be conclusive for all purposes and binding on you and on us. We may appoint a different calculation agent from time to time after the date of the relevant terms supplement without your consent and without notifying you.

The calculation agent will provide written notice to the trustee at its New York office, on which notice the trustee may conclusively rely, of the amount to be paid at maturity on or prior to 11:00 a.m., New York City time, on the business day preceding the maturity date.

All calculations with respect to the Initial Underlying Level, the Downside Threshold, if applicable, the Final Underlying Level, the Underlying Return or any Closing Level of the Underlying will be rounded to the nearest one hundred-thousandth, with five one-millionths rounded upward (e.g., .876545 would be rounded to .87655); all dollar amounts related to determination of the payment per \$10 in principal amount of the securities at maturity, if any, will be rounded to the nearest one ten-thousandth, with five one hundred-thousandths rounded upward (e.g., .87645 would be rounded up to .8765); and all dollar amounts paid, if any, on the aggregate principal amount of securities per holder will be rounded to the nearest cent, with one-half cent rounded upward.

#### Market Disruption Events

Certain events may prevent the calculation agent from determining the Closing Level of the Underlying on the Final Valuation Date and, consequently, the Underlying Return, or calculating the amount, if any, that we will pay to you at maturity. These events may include disruptions or suspensions of trading on the markets as a whole. We refer to each of these events individually as a “market disruption event.”



With respect to the Underlying and any relevant successor index, a “market disruption event,” unless otherwise specified in the relevant terms supplement, means:

a suspension, absence or material limitation of trading of equity securities then constituting 20% or more of the level of the Underlying (or the relevant successor index) on the relevant exchanges (as defined below) for such securities for more than two hours of trading during, or during the one hour period preceding the close of, the principal trading session on such relevant exchange; or

a breakdown or failure in the price and trade reporting systems of any relevant exchange as a result of which the reported trading prices for equity securities then constituting 20% or more of the level of the Underlying (or the relevant successor index) during the one hour preceding the close of the principal trading session on such relevant exchange are materially inaccurate; or

a suspension, absence or material limitation of trading on the primary exchange or market for trading in futures or options contracts related to the Underlying (or the relevant successor index) for more than two hours of trading during, or during the one hour period preceding the close of, the principal trading session on such exchange or market; or

a decision to permanently discontinue trading in the relevant futures or options contracts;

in each case as determined by the calculation agent in its sole discretion; and

a determination by the calculation agent in its sole discretion that the event described above materially interfered with our ability or the ability of any of our affiliates to adjust or unwind all or a material portion of any hedge with respect to the securities.

For purposes of determining whether a market disruption event with respect to the Underlying (or the relevant successor index) exists at any time, if trading in a security included in the Underlying (or the relevant successor index) is materially suspended or materially limited at that time, then the relevant percentage contribution of that security to the level of the Underlying (or the relevant successor index) will be based on a comparison of:

the portion of the level of the Underlying (or the relevant successor index) attributable to that security relative to

the overall level of the Underlying (or the relevant successor index),

in each case immediately before that suspension or limitation.

For purposes of determining whether a market disruption event with respect to the Underlying (or the relevant successor index) has occurred, unless otherwise specified in the relevant terms supplement:

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 the relevant exchange, or the primary exchange or market for trading in futures or options contracts related to the Underlying (or the relevant successor index);

limitations pursuant to the rules of any relevant exchange similar to NYSE Rule 80B (or any applicable rule or regulation enacted or promulgated by any other self-regulatory organization or any government agency of scope similar to NYSE Rule 80B as determined by the calculation agent) on trading during significant market fluctuations will constitute a suspension, absence or material limitation of trading;

a suspension of trading in futures or options contracts on the Underlying (or the relevant successor index) by the primary exchange or market trading in such contracts by reason of

- a price change exceeding limits set by such exchange or market,
- an imbalance of orders relating to such contracts, or
- a disparity in bid and ask quotes relating to such contracts

will, in each such case, constitute a suspension, absence or material limitation of trading in futures or options contracts related to the Underlying (or the relevant successor index); and

a “suspension, absence or material limitation of trading” on any relevant exchange or on the primary exchange or market on which futures or options contracts related to the Underlying (or the relevant successor index) are traded will not include any time when such exchange or market is itself closed for trading under ordinary circumstances. “Relevant exchange” means, with respect to the Underlying or any relevant successor index, the primary exchange or market of trading for any security (or any combination thereof) then included in the Underlying or such successor index, as applicable.

#### Discontinuation of the Index; Alteration of Method of Calculation

If the Index Sponsor discontinues publication of an index and the Index Sponsor or another entity publishes a successor or substitute index that the calculation agent determines, in its sole discretion, to be comparable to the discontinued index (such index being referred to herein as a “successor index”), then the Closing Level of the Underlying on the Final Valuation Date will be determined by reference to the level of such successor index at the close of trading on the relevant exchange for the successor index on such day.

Upon any selection by the calculation agent of a successor index, the calculation agent will cause written notice to be promptly furnished to the trustee, to us and to the holders of the securities.

If the Index Sponsor discontinues publication of an index prior to, and that discontinuation is continuing on the Final Valuation Date, and the calculation agent determines, in its sole discretion, that no successor index is available at that time or the calculation agent has previously selected a successor index and publication of that successor index is discontinued prior to, and that discontinuation is continuing on, the Final Valuation Date, then the calculation agent will determine the Closing Level of the Underlying for that date. The Closing Level of the Underlying will be computed by the calculation agent in accordance with the formula for and method of calculating the index or successor index, as applicable, last in effect prior to the discontinuation, using the closing price (or, if trading in the relevant securities has been materially suspended or materially limited, the calculation agent’s good faith estimate of the closing price that would have prevailed but for the suspension or limitation) at the close of the principal trading session on that date of each security most recently included in the index or successor index, as applicable.

Notwithstanding these alternative arrangements, discontinuation of the publication of the index or successor index, as applicable, may adversely affect the value of the securities.

If at any time the method of calculating the index or a successor index, or the level thereof, is changed in a material respect, or if the index or a successor index is in any other way modified so that the index or successor index does not, in the opinion of the calculation agent, fairly represent the level of the index or successor index had those changes or modifications not been made, then the calculation agent will, at the close of business in New York City on the date on which the Closing Level of the Underlying is to be determined, make any calculations and adjustments as, in the good faith judgment of the calculation agent, may be necessary in order to arrive at a level comparable to the level of the index or successor index, as the case may be, as if those changes or modifications had not been made, and calculate the Closing Level of the Underlying with reference to the index or such successor index, as adjusted. Accordingly, if the method of calculating the index or a successor index is modified so that the level of the index or such successor index is a fraction of what it would have been if there had been no such modification (e.g., due to a split in the Underlying), then the calculation agent will adjust its calculation of

the index or such successor index in order to arrive at a level of the index or such successor index as if there had been no such modification (e.g., as if such split had not occurred).

Payment of Additional Amounts

We will pay any amounts to be paid by us on the securities without deduction or withholding for, or on account of, any and all present or future income, stamp and other taxes, levies, imposts, duties, charges, fees, deductions, or withholdings (“taxes”) now or hereafter imposed, levied, collected, withheld, or assessed by or on behalf of Canada or any Canadian political subdivision or authority that has the power to tax, unless the deduction or withholding is required by law or by the interpretation or administration thereof by the relevant governmental authority. At any time a Canadian taxing jurisdiction requires us to deduct or withhold for or on account of taxes from any payment made under or in respect of the securities, we will pay such additional amounts (“Additional Amounts”) as may be necessary, so that the net amounts received by each holder (including Additional Amounts), after such deduction or withholding, shall not be less than the amount the holder would have received had no such deduction or withholding been required. However, no Additional Amounts will be payable with respect to a payment made to a holder of a security or of a right to receive payments in respect thereto (a “Payment Recipient”), which we refer to as an “Excluded Holder,” in respect of a beneficial owner or Payment Recipient:

- (i) with whom we do not deal at arm’s length (within the meaning of the Income Tax Act (Canada)) at the time of making such payment;  
who is subject to such taxes by reason of the holder being connected presently or formerly with Canada or any province or territory thereof otherwise than by reason of the holder’s activity in connection with purchasing the securities, the holding of the securities or the receipt of payments thereunder;
- (ii) who is, or who does not deal at arm’s length with a person who is, a “specified shareholder” (within the meaning of subsection 18(5) of the Income Tax Act (Canada)) of Royal Bank of Canada (generally a person will be a “specified shareholder” for this purpose if that person, either alone or together with persons with whom the person does not deal at arm’s length, owns 25% or more of (a) our voting shares, or (b) the fair market value of all of our issued and outstanding shares);  
who presents such security for payment (where presentation is required, such as if a security is issued in definitive form) more than 30 days after the relevant date; for this purpose, the “relevant date” in relation to any payments on any security means:
  - (a) the due date for payment thereof (whether at maturity or upon an earlier acceleration), or
  - (b) if the full amount of the monies payable on such date has not been received by the trustee on or prior to such due date, the date on which the full amount of such monies has been received and notice to that effect is given to holders of the securities in accordance with the senior indenture;
- (iii) who could lawfully avoid (but has not so avoided) such withholding or deduction by complying, or requiring that any agent comply, with any statutory requirements necessary to establish qualification for an exemption from withholding, or by making, or requiring that any agent make, a declaration of non-residence or other similar claim for exemption to any relevant tax authority; or
- (iv) who is subject to deduction or withholding on account of any tax, assessment, or other governmental charge that is imposed or withheld by reason of the application of Section 1471 through 1474 of the United States Internal Revenue Code of 1986, as amended (the “Code”) (or any successor provisions), any regulation, pronouncement, or agreement

thereunder, official interpretations thereof, or any law implementing an intergovernmental approach thereto, whether currently in effect or as published and amended from time to time.

For purposes of clause (iv) above, if a security is presented for payment more than 30 days after the relevant date, we shall only be required to pay such Additional Amounts as shall have accrued as of such 30th day, and no further Additional Amounts shall accrue or become payable after such date.

For the avoidance of doubt, we will not have any obligation to pay any holders Additional Amounts on any tax which is payable otherwise than by deduction or withholding from payments made under or in respect of the securities.

We will also make such withholding or deduction and remit the full amount deducted or withheld to the relevant authority in accordance with applicable law. We will furnish to the trustee, within 30 days after the date the payment of any taxes is due pursuant to applicable law, certified copies of tax receipts evidencing that such payment has been made or other evidence of such payment satisfactory to the trustee. We will indemnify and hold harmless each holder of the securities (other than an Excluded Holder) and upon written request reimburse each such holder for the amount of (x) any taxes so levied or imposed and paid by such holder as a result of payments made under or with respect to the securities and (y) any taxes levied or imposed and paid by such holder with respect to any reimbursement under (x) above, but excluding any such taxes on such holder's net income or capital.

For additional information, see the section entitled "Canadian Taxation" in the accompanying prospectus.

#### Events of Default

Under the heading "Description of Debt Securities—Events of Default" in the accompanying prospectus is a description of events of default relating to debt securities including the securities.

#### Payment upon an Event of Default

Unless otherwise specified in the relevant terms supplement, in case an event of default with respect to the securities shall have occurred and be continuing, the amount declared due and payable per \$10 in principal amount of the securities upon any acceleration of the securities will be determined by the calculation agent and will be an amount in cash equal to the amount payable at maturity per \$10 in principal amount of the securities as described under the caption "—Payment at Maturity," calculated as if the date of acceleration were the Final Valuation Date.

If the maturity of the securities is accelerated because of an event of default as described above, we will, or will cause the calculation agent to, provide written notice to the trustee at its New York office, on which notice the trustee may conclusively rely, and to DTC of the cash amount due with respect to the securities as promptly as possible and in no event later than two business days after the date of acceleration.

#### Modification

Under the heading "Description of Debt Securities—Modification and Waiver of the Debt Securities" in the accompanying prospectus is a description of when the consent of each affected holder of debt securities is required to modify the senior indenture.

#### Defeasance

The provisions described in the accompanying prospectus under the heading "Description of Debt Securities—Defeasance" are not applicable to the securities, unless otherwise specified in the relevant terms supplement.

#### Listing

The securities will not be listed on any securities exchange, unless otherwise specified in the relevant terms supplement.

Book-Entry Only Issuance — The Depository Trust Company

DTC will act as securities depository for the securities. The securities will be issued only as fully-registered securities registered in the name of Cede & Co. (DTC's nominee). One or more fully-registered global securities certificates, representing the total aggregate principal amount of the securities, will be issued and will be deposited with DTC. See the descriptions contained in the accompanying prospectus under the headings "Description of Debt Securities—Ownership and Book-Entry Issuance" and "—Considerations Relating to DTC."

Registrar, Transfer Agent and Paying Agent

Payment of amounts due at maturity on the securities will be payable and the transfer of the securities will be registrable at the principal corporate trust office of The Bank of New York Mellon in The City of New York.

The Bank of New York Mellon or one of its affiliates will act as registrar and transfer agent for the securities. The Bank of New York Mellon will also act as paying agent and may designate additional paying agents.

Registration of transfers of the securities will be effected without charge by or on behalf of The Bank of New York Mellon, but upon payment (with the giving of such indemnity as The Bank of New York Mellon may require) in respect of any tax or other governmental charges that may be imposed in relation to it.

Governing Law

The securities will be governed by and interpreted in accordance with the laws of the State of New York.

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CANADIAN FEDERAL INCOME TAX SUMMARY

Investors should read carefully the description of material Canadian federal income tax considerations relevant to a Non-resident Holder owning debt securities under “Tax Consequences—Canadian Taxation” in the accompanying prospectus.

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**SUPPLEMENTAL DISCUSSION OF U.S. FEDERAL INCOME TAX CONSEQUENCES**

The following is a general description of the material U.S. tax considerations relating to the securities. It does not purport to be a complete analysis of all tax considerations relating to the securities. Prospective purchasers of the securities should consult their tax advisors as to the consequences under the tax laws of the country of which they are resident for tax purposes and the tax laws of Canada and the United States of acquiring, holding and disposing of the securities and receiving payments under the securities. This summary is based upon the law as in effect on the date of this product prospectus supplement and is subject to any change in law that may take effect after such date. [Subject to Review and Updating]

**Supplemental U.S. Tax Considerations**

The following disclosure—including the opinion of Morrison & Foerster LLP—has been prepared without regard to any particular security that you may purchase in the future and, therefore, is provided solely as a matter of general information. You should not rely upon the following disclosure (including the opinion of Morrison & Foerster LLP), or the disclosure under “Tax Consequences—United States Taxation” in the prospectus or “Certain Income Tax Consequences—United States Taxation” in the prospectus supplement, with regard to an investment in any particular security because this disclosure (including the opinion of Morrison & Foerster LLP) does not take into account the terms of any particular security or the tax consequences of investing in or holding any particular security unless the terms supplement applicable to your securities expressly indicates that you may rely on the following disclosure and expressly states that you may rely on the opinion of Morrison & Foerster LLP. Any security that you purchase may have terms that would result in a tax treatment that is significantly different from the treatment described below. If an investor in the securities is not subject to a significant risk that it will lose a significant amount of its investment in the securities, the tax treatment of that security may differ substantially from that described in the discussion below. There may be other features or terms of your securities that will cause this tax section to be inapplicable to your securities. Further, this discussion does not address the tax consequences applicable to any holders under Section 451(b) of the U.S. Internal Revenue Code of 1986, as amended (the “Code”).

Consequently, any tax disclosure relevant to any security you may purchase will be set forth only in the terms supplement relating to your security, and, unless the terms supplement indicates otherwise, you should not rely on the tax disclosure below or in the prospectus supplement or prospectus in deciding whether to invest in any security. Moreover, in all cases, you should consult with your own tax advisor concerning the consequences of investing in and holding any particular security you propose to purchase.

The following section supplements the discussion of U.S. federal income taxation in the accompanying prospectus and prospectus supplement. It applies only to those initial holders who are not excluded from the discussion of U.S. federal income taxation in the accompanying prospectus.

**NO STATUTORY, JUDICIAL OR ADMINISTRATIVE AUTHORITY DIRECTLY DISCUSSES HOW THE SECURITIES SHOULD BE TREATED FOR U.S. FEDERAL INCOME TAX PURPOSES. AS A RESULT, THE U.S. FEDERAL INCOME TAX CONSEQUENCES OF AN INVESTMENT IN THE SECURITIES ARE UNCERTAIN. BECAUSE OF THE UNCERTAINTY, YOU SHOULD CONSULT YOUR TAX ADVISOR IN DETERMINING THE U.S. FEDERAL INCOME TAX AND OTHER TAX CONSEQUENCES OF YOUR INVESTMENT IN THE SECURITIES, INCLUDING THE APPLICATION OF STATE, LOCAL OR OTHER TAX LAWS AND THE POSSIBLE EFFECTS OF CHANGES IN FEDERAL OR OTHER TAX LAWS.**

We will not attempt to ascertain whether the issuer of any of the component stocks underlying any particular Underlying would be treated as a “passive foreign investment company” within the meaning of Section 1297 of the Code or a “U.S. real property holding corporation” within the meaning of Section 897 of the Code. If the issuer of one or more such stocks were so treated, certain adverse U.S. federal income tax consequences could possibly apply. You should refer to any available information filed with the SEC and other authorities by the issuers of the component stocks included in each Underlying and consult your tax advisor regarding the possible consequences to you in this regard.

In the opinion of our counsel, Morrison & Foerster LLP, it would generally be reasonable to treat a security with terms described in this product prospectus supplement as a pre-paid cash-settled derivative contract in respect of the Underlying for U.S. federal income tax purposes, and the terms of the securities require a holder and us (in the absence of a change in law or an administrative or judicial ruling to the contrary) to treat the securities for all tax purposes in accordance with such characterization. If the securities are so treated, subject to the discussion below concerning the potential application of the “constructive ownership” rules under Section 1260 of the Code, a U.S. holder should generally recognize capital gain or loss upon the sale or maturity of the securities in an amount equal to the difference between the amount a holder receives at such time and the holder’s tax basis in the securities. In general, a U.S. holder’s tax basis in the securities will be equal to the price the holder paid for the securities. Capital gain recognized by an individual U.S. holder is generally taxed at preferential rates where the property is held for more than one year and is generally taxed at ordinary income rates where the property is held for one year or less. The deductibility of capital losses is subject to limitations. The holding period for securities of a U.S. holder who acquires the securities upon issuance will generally begin on the date after the issue date (i.e., the settlement date) of the securities. If the securities are held by the same U.S. holder until maturity, that holder’s holding period will generally include the maturity date. It is possible that the Internal Revenue Service could assert that a U.S. holder’s holding period in respect of the securities should end on the date on which the amount the holder is entitled to receive upon the maturity of the securities is determined, even though the holder will not receive any amounts from us in respect of the securities prior to the maturity of the securities. In such case, if that date is not in excess of one year from the issue date, a U.S. holder may be treated as having a holding period in respect of the securities that is one year or less even if the holder receives cash upon maturity of the securities at a time that is more than one year after the beginning of its holding period.

**Potential Application of Section 1260 of the Internal Revenue Code.** If one or more of the issuers of any of the component stocks underlying any particular Underlying includes the type of financial asset described under Section 1260 of the Code (including, among others, any equity interest in pass-thru entities such as ETFs, regulated investment companies, real estate investment trusts, partnerships, and passive foreign investment companies, each a “Section 1260 Financial Asset”), while the matter is not entirely clear, unless otherwise specified in the applicable pricing supplement, there exists a substantial risk that an investment in a note is, in whole or in part, a “constructive ownership transaction” to which Section 1260 of the Code applies. If Section 1260 of the Code applies, all or a portion of any long-term capital gain recognized by a U.S. holder in respect of a security will be recharacterized as ordinary income (the “Excess Gain”). In addition, an interest charge will also apply to any deemed underpayment of tax in respect of any Excess Gain to the extent such gain would have resulted in gross income inclusion for the U.S. holder in taxable years prior to the taxable year of the sale or maturity (assuming such income accrued at a constant rate equal to the applicable federal rate as of the date of sale or maturity).

If an investment in a security is treated as a constructive ownership transaction, it is not clear to what extent any long-term capital gain of a U.S. holder in respect of the security will be recharacterized as ordinary income. It is possible, for example, that the amount of the Excess Gain (if any) that would be recharacterized as ordinary income in respect of the security will equal the excess of (i) any long-term capital gain recognized by the U.S. holder in respect of the security and attributable to Section 1260 Financial Assets, over (ii) the “net underlying long-term capital gain” (as defined in Section 1260 of the Code) such U.S. holder would have had if such U.S. holder had acquired an amount of the corresponding Section 1260 Financial Assets at fair market value on the original issue date for an amount equal to the portion of the issue price of the security attributable to the corresponding Section 1260 Financial Assets and sold such amount of Section 1260 Financial Assets upon the date of sale or maturity of the security at fair market value (and appropriately taking into account any leveraged upside exposure). Alternatively, the Internal Revenue Service may contend that the Excess Gain should not be limited to amounts attributable to a Section 1260 Financial Asset, but should instead apply to all of the issuers of the component stocks underlying the particular Underlying. To the extent any gain is treated as long-term capital gain after application of the recharacterization rules of Section 1260 of the Code, such gain would be subject to U.S. federal income tax at the rates that would have been applicable to the net underlying long-term capital gain. However, unless otherwise established by clear and convincing evidence, the net



underlying long-term capital gain is treated as zero. U.S. holders should consult their tax advisors regarding the potential application of Section 1260 of the Code to an investment in the security.

**Alternative Treatments.** Alternative tax treatments of the securities are also possible and the Internal Revenue Service might assert that a treatment other than that described above is more appropriate. For example, it is possible to treat the securities, and the Internal Revenue Service might assert that the securities should be treated, as a single debt instrument. If the securities have a term that exceeds one year, such a debt instrument would be subject to the special tax rules governing contingent payment debt instruments. If the securities are so treated, a holder would generally be required to accrue interest currently over the term of the securities even though that holder will not receive any payments from us prior to maturity. In addition, any gain a holder might recognize upon the sale or maturity of the securities would generally be ordinary income and any loss recognized by a holder at such time would be ordinary loss to the extent of interest that same holder included in income in the current or previous taxable years in respect of the securities, and thereafter, would be capital loss. If the securities are treated as a single debt instrument that has a term of no more than one year, the securities would be treated as a single contingent short-term debt instrument, which would also result in tax consequences that are different from those described above.

If the Underlying periodically rebalances, it is possible that the securities could be treated as a series of derivative contracts, each of which matures on the next rebalancing date. If the securities were properly characterized in such a manner, a holder would be treated as disposing of the securities on each rebalancing date in return for new derivative contracts that mature on the next rebalancing date, and a holder would accordingly likely recognize capital gain or loss on each rebalancing date equal to the difference between the holder's basis in the securities (which would be adjusted to take into account any prior recognition of gain or loss) and the fair market value of the securities on such date. Because of the absence of authority regarding the appropriate tax characterization of the securities, it is also possible that the Internal Revenue Service could seek to characterize the securities in a manner that results in other tax consequences that are different from those described above. For example, the Internal Revenue Service could possibly assert that any gain or loss that a holder may recognize upon the sale or maturity of the securities should be treated as ordinary gain or loss.

The Internal Revenue Service has released a notice that may affect the taxation of holders of the securities. According to the notice, the Internal Revenue Service and the U.S. Treasury Department are actively considering whether the holder of an instrument similar to the securities should be required to accrue ordinary income on a current basis. It is not possible to determine what guidance they will ultimately issue, if any. It is possible, however, that under such guidance, holders of the securities will ultimately be required to accrue income currently and this could be applied on a retroactive basis. The Internal Revenue Service and the U.S. Treasury Department are also considering other relevant issues, including whether additional gain or loss from such instruments should be treated as ordinary or capital and whether the special "constructive ownership rules" of Section 1260 of the Code, which generally operate to recharacterize certain long-term capital gains as ordinary income and impose an interest charge, might be applied to such instruments. Holders are urged to consult their tax advisors concerning the significance, and the potential impact, of the above considerations. Unless stated otherwise in the applicable terms supplement, we intend to treat the securities for U.S. federal income tax purposes in accordance with the treatment described in this product prospectus supplement unless and until such time as the U.S. Treasury Department and Internal Revenue Service determine that some other treatment is more appropriate.

**Backup Withholding and Information Reporting.** Payments made with respect to the securities and proceeds from the sale or maturity of the securities may be subject to a backup withholding tax unless, in general, the holder complies with certain procedures or is an exempt recipient. Any amounts so withheld generally will be refunded by the Internal Revenue Service or allowed as a credit against the holder's U.S. federal income tax liability, provided the holder makes a timely filing of an appropriate tax return or refund claim to the Internal Revenue Service.

Reports will be made to the Internal Revenue Service and to holders that are not exempted from the reporting requirements.

**Non-U.S. Holders.** The following discussion applies to non-U.S. holders of the securities. A non-U.S. holder is a beneficial owner of a security that, for U.S. federal income tax purposes, is a non-resident alien individual, a foreign corporation, or a foreign estate or trust.

Except as discussed below, a non-U.S. holder will generally not be subject to U.S. federal income or withholding tax for amounts paid in respect of the securities, provided that (i) the holder complies with any applicable certification requirements, (ii) the payment is not effectively connected with the conduct by the holder of a U.S. trade or business, and (iii) if the holder is a non-resident alien individual, such holder is not present in the United States for 183 days or more during the taxable year of the sale or maturity of the securities. In the case of (ii) above, the holder generally would be subject to U.S. federal income tax with respect to any income or gain in the same manner as if the holder were a U.S. holder and, in the case of a holder that is a corporation, the holder may also be subject to a branch profits tax equal to 30% (or such lower rate provided by an applicable U.S. income tax treaty) of a portion of its earnings and profits for the taxable year that are effectively connected with its conduct of a trade or business in the United States, subject to certain adjustments. Payments made to a non-U.S. holder may be subject to information reporting and to backup withholding unless the holder complies with applicable certification and identification requirements as to its foreign status.

A “dividend equivalent” payment is treated as a dividend from sources within the United States and such payments generally would be subject to a 30% U.S. withholding tax if paid to a non-U.S. holder. Under U.S. Treasury Department regulations, payments (including deemed payments) with respect to equity-linked instruments (“ELIs”) that are “specified ELIs” may be treated as dividend equivalents if such specified ELIs reference an interest in an “underlying security,” which is generally any interest in an entity taxable as a corporation for U.S. federal income tax purposes if a payment with respect to such interest could give rise to a U.S. source dividend. However, the IRS has issued guidance that states that the U.S. Treasury Department and the IRS intend to amend the effective dates of the U.S. Treasury Department regulations to provide that withholding on dividend equivalent payments will not apply to specified ELIs that are not delta-one instruments and that are issued before January 1, 2019. Accordingly, if the securities are not delta-one instruments and are issued before January 1, 2019, non-U.S. holders should not be subject to withholding on dividend equivalent payments, if any, under the securities. However, it is possible that the securities could be treated as deemed reissued for U.S. federal income tax purposes upon the occurrence of certain events affecting the Underlying or the securities (for example, please refer to our discussion relating to Underlying rebalancing above), and following such occurrence the securities could be treated as subject to withholding on dividend equivalent payments. Non-U.S. holders that enter, or have entered, into other transactions in respect of the Underlying or the securities should consult their tax advisors as to the application of the dividend equivalent withholding tax in the context of the securities and their other transactions. If any payments are treated as dividend equivalents subject to withholding, we (or the applicable paying agent) would be entitled to withhold taxes without being required to pay any additional amounts with respect to amounts so withheld.

As discussed above, alternative characterizations of the securities for U.S. federal income tax purposes are possible. Should an alternative characterization, by reason of change or clarification of the law, by regulation or otherwise, cause payments as to the securities to become subject to withholding tax, we will withhold tax at the applicable statutory rate. The Internal Revenue Service has also indicated that it is considering whether income in respect of instruments such as the securities should be subject to withholding tax. We will not be required to pay any additional amounts in respect of such withholding. Prospective investors should consult their own tax advisors in this regard.

#### Foreign Account Tax Compliance Act

The Foreign Account Tax Compliance Act (“FATCA”) imposes a 30% U.S. withholding tax on certain U.S. source payments, including interest (and original issue discount), dividends, other fixed or determinable annual or periodical gain, profits, and income, and on the gross proceeds from a disposition of property of a type which can produce U.S. source interest or dividends (“Withholdable Payments”), if paid to a foreign

financial institution (including amounts paid to a foreign financial institution on behalf of a holder), unless such institution enters into an agreement with the U.S. Treasury Department to collect and provide to the U.S. Treasury Department certain information regarding U.S. financial account holders, including certain account holders that are foreign entities with U.S. owners, with such institution or otherwise complies with FATCA. In addition, the securities may constitute a “financial account” for these purposes and thus, be subject to information reporting requirements pursuant to FATCA. FATCA also generally imposes a withholding tax of 30% on Withholdable Payments made to a non-financial foreign entity unless such entity provides the withholding agent with a certification that it does not have any substantial U.S. owners or a certification identifying the direct and indirect substantial U.S. owners of the entity. Under certain circumstances, a holder may be eligible for refunds or credits of such taxes.

The U.S. Treasury Department and the IRS have announced that withholding on payments of gross proceeds from a sale or redemption of the notes will only apply to payments made after December 31, 2018. If we determine withholding is appropriate with respect to the securities, we will withhold tax at the applicable statutory rate, and we will not pay any additional amounts in respect of such withholding. Foreign financial institutions and non-financial foreign entities located in jurisdictions that have an intergovernmental agreement with the United States governing FATCA may be subject to different rules. Prospective investors are urged to consult with their own tax advisors regarding the possible implications of FATCA on their investment in the securities.

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## SUPPLEMENTAL PLAN OF DISTRIBUTION

Under the terms and subject to the conditions contained in the Distribution Agreement entered into between Royal Bank of Canada, RBCCM and UBS Financial Services Inc. (an “Agent” or “UBS”) and certain other agents that may be party to the Distribution Agreement, as amended or supplemented, from time to time (each an “Agent” and collectively the “Agents”), each Agent participating in an offering of securities, acting as principal for its own account, or as placement agent for certain fee-based advisory accounts, will agree to purchase, and we will agree to sell, the principal amount of securities set forth on the cover page of the relevant terms supplement. Each such Agent proposes initially to offer the securities directly to the public at the public offering price set forth on the cover page of the relevant terms supplement. UBS may allow a concession to other dealers, or we may pay other fees, in the amount set forth on the cover page of the relevant terms supplement. In some cases, such other dealers may resell the securities to other securities dealers who resell to investors and pay those other securities dealers all or part of the discount or commission they receive from the Agent or Agents (as the case may be). After the initial offering of the securities, the Agents may vary the offering price and other selling terms from time to time.

RBCCM may act as principal or agent in connection with offers and sales of the securities in the secondary market. Secondary market offers and sales will be made at prices related to market prices at the time of such offer or sale; accordingly, RBCCM or a dealer may change the public offering price, concession and discount after the offering has been completed.

No action has been or will be taken by us, RBCCM, UBS or any dealer that would permit a public offering of the securities or possession or distribution of this product prospectus supplement, or the accompanying prospectus supplement, prospectus or terms supplement, other than in the United States, where action for that purpose is required. No offers, sales or deliveries of the securities, or distribution of this product prospectus supplement, or the accompanying prospectus supplement, prospectus or terms supplement or any other 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 will not impose any obligations on us, UBS or any dealer.

Each Agent has represented and agreed, and each dealer through which we may offer the securities has represented and agreed, that it (i) will comply with all applicable laws and regulations in force in each non-U.S. jurisdiction in which it purchases, offers, sells or delivers the securities or possesses or distributes this product prospectus supplement, and the accompanying prospectus supplement, prospectus and terms supplement and (ii) will obtain any consent, approval or permission required by it for the purchase, offer or sale by it of the securities under the laws and regulations in force in each non-U.S. jurisdiction to which it is subject or in which it makes purchases, offers or sales of the securities. We shall not have responsibility for any Agent’s or any dealer’s compliance with the applicable laws and regulations or obtaining any required consent, approval or permission.

No Prospectus (as defined in Directive 2003/71/EC (as amended, the “Prospectus Directive”)) will be prepared in connection with the securities. Accordingly, the securities may not be offered to the public in any member state of the European Economic Area (the “EEA”), and any purchaser of the securities who subsequently sells any of the securities in any EEA member state must do so only in accordance with the requirements of the Prospectus Directive, as implemented in that member state.

The securities are not intended to be offered, sold or otherwise made available to, and should not be offered, sold or otherwise made available to, any retail investor in the EEA. For these purposes, the expression “offer” includes the communication in any form and by any means of sufficient information on the terms of the offer and the securities to be offered so as to enable an investor to decide to purchase or subscribe the securities, and a “retail investor” means a person who is one (or more) of: (a) a retail client, as defined in point (11) of Article 4(1) of Directive 2014/65/EU (as amended, “MiFID II”); or (b) a customer, within the meaning of Insurance Distribution Directive 2016/97/EU, as amended, where that customer would not qualify as a professional client as defined in point (10) of Article 4(1) of MiFID II; or (c) not a qualified investor as defined in the Prospectus Directive. Consequently, no key information document required by Regulation (EU) No 1286/2014 (as amended, the “PRIIPs Regulation”) for offering

or selling the securities or otherwise making them available to retail investors in the EEA has been prepared, and therefore, offering or selling the securities or otherwise making them available to any retail investor in the EEA may be unlawful under the PRIIPs Regulation.

Unless otherwise specified in the relevant terms supplement, the Settlement Date for the securities will be the third business day following the Trade Date (which is referred to as a “T+3” settlement cycle).

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#### EMPLOYEE RETIREMENT INCOME SECURITY ACT

This section is only relevant to you if you are an insurance company or the fiduciary of a pension plan or an employee benefit plan (including a governmental plan, an IRA or a Keogh Plan) proposing to invest in the securities.

The Employee Retirement Income Security Act of 1974, as amended (“ERISA”), imposes certain requirements on “employee benefit plans” (as defined in Section 3(3) of ERISA) subject to ERISA, including entities such as collective investment funds and separate accounts whose underlying assets include the assets of such plans (collectively, “ERISA Plans”) and on those persons who are fiduciaries with respect to ERISA Plans. Each fiduciary of an ERISA Plan should consider the fiduciary standards of ERISA in the context of the ERISA Plan’s particular circumstances before authorizing an investment in the covered bonds. Accordingly, among other factors, the fiduciary should consider whether the investment would satisfy the prudence and diversification requirements of ERISA and would be consistent with the documents and instruments governing the ERISA Plan.

In addition, Section 406 of ERISA and Section 4975 of the Internal Revenue Code prohibit certain transactions involving the assets of an ERISA Plan, as well as those plans that are not subject to ERISA but which are subject to Section 4975 of the Internal Revenue Code, such as individual retirement accounts, including entities whose underlying assets include the assets of such plans (together with ERISA Plans, “Plans”) and certain persons (referred to as “parties in interest” or “disqualified persons”) having certain relationships to such Plans, unless a statutory or administrative exemption is applicable to the transaction. Governmental plans may be subject to similar prohibitions. Therefore, a plan fiduciary considering purchasing securities should consider whether the purchase or holding of such instruments might constitute a “prohibited transaction.”

Royal Bank of Canada and certain of its affiliates each may be considered a “party in interest” or a “disqualified person” with respect to many employee benefit plans by reason of, for example, Royal Bank (or its affiliate) providing services to such plans. Prohibited transactions within the meaning of ERISA or the Internal Revenue Code may arise, for example, if securities are acquired by or with the assets of a Plan, and with respect to which Royal Bank or any of its affiliates is a “party in interest” or a “disqualified person,” unless those securities are acquired under an exemption for transactions effected on behalf of that Plan by a “qualified professional asset manager” or an “in-house asset manager,” for transactions involving insurance company general accounts, for transactions involving insurance company pooled separate accounts, for transactions involving bank collective investment funds, or under another available exemption. Section 408(b)(17) provides an additional exemption for the purchase and sale of securities and related lending transactions where neither the issuer of the securities nor any of its affiliates have or exercise any discretionary authority or control or render any investment advice with respect to the assets of any Plan involved in the transaction and the Plan pays no more than “adequate consideration” in connection with the transaction. The person making the decision on behalf of a Plan or a governmental plan shall be deemed, on behalf of itself and any such plan, by purchasing and holding the securities, or exercising any rights related thereto, to represent that (a) such purchase, holding and exercise of the securities will not result in a non-exempt prohibited transaction under ERISA or the Internal Revenue Code (or, with respect to a governmental plan, under any similar applicable law or regulation) and (b) neither Royal Bank nor any of its affiliates is a “fiduciary” (within the meaning of Section 3(21) of ERISA) with respect to the purchaser or holder in connection with such person’s acquisition, disposition or holding of the securities, or any exercise related thereto or as a result of any exercise by Royal Bank or any of its affiliates of any rights in connection with the securities, and no advice provided by Royal Bank or any of its affiliates has formed a primary basis for any investment decision by or on behalf of such purchaser or holder in connection with the securities and the transactions contemplated with respect to the securities.

If you are an insurance company or the fiduciary of a pension plan or an employee benefit plan, and propose to invest in the securities, you should consult your legal counsel.