

ROYAL BANK OF CANADA  
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The information in this preliminary pricing supplement is not complete and may be changed. This preliminary pricing supplement is not an offer to sell nor does it seek an offer to buy these securities in any jurisdiction where the offer or sale is not permitted.

Subject to Completion. Dated January 8, 2019.

Pricing Supplement SPBELN 303-C to the Prospectus dated September 7, 2018, the Series H Prospectus Supplement dated September 7, 2018, and the Product Prospectus Supplement PB-1 dated September 20, 2018

Royal Bank of Canada

\$

Leveraged Buffered Notes Linked to the iShares® MSCI Emerging Markets ETF, due , 2020

The notes will not bear interest. The amount that you will be paid on your notes on the stated maturity date (expected to be the second scheduled business day after the determination date) is based on the performance of the iShares® MSCI Emerging Markets ETF (which we refer to as the “underlier”) as measured from the trade date to and including the determination date (expected to be between 19 and 22 months after the trade date). If the final underlier level on the determination date is greater than the initial underlier level (set on the trade date and may be higher or lower than the actual closing price of the underlier on the trade date), the return on your notes will be positive, subject to the maximum settlement amount (expected to be between \$1,270.15 and \$1,316.95 for each \$1,000 principal amount of the notes). If the final underlier level is less than the initial underlier level but greater than or equal to the buffer level of 87.50% of the initial underlier level, you will receive the principal amount of your notes. If the final underlier level is less than the buffer level, the return on your notes will be negative. You could lose your entire investment in the notes.

To determine your payment at maturity, we will calculate the underlier return, which is the percentage increase or decrease in the final underlier level from the initial underlier level. On the stated maturity date, for each \$1,000 principal amount of your notes, you will receive an amount in cash equal to:

if the underlier return is positive (the final underlier level is greater than the initial underlier level), the sum of (i) \$1,000 plus (ii) the product of (a) \$1,000 times (b) the upside participation rate of 150% times (c) the underlier return, subject to the maximum settlement amount; or

if the underlier return is zero or negative but not below -12.50% (the final underlier level is equal to or less than the initial underlier level but not by more than 12.50%), \$1,000; or

if the underlier return is negative and is below -12.50% (the final underlier level is less than the initial underlier level by more than 12.50%), the sum of (i) \$1,000 plus (ii) the product of (a) 100/87.50 (which is approximately 1.1429) times (b) the sum of the underlier return plus 12.50% times (c) \$1,000. This amount will be less than \$1,000.

Our initial estimated value of the notes as of the date of this preliminary pricing supplement is \$996.33 per \$1,000 in principal amount, which is less than the original issue price. The final pricing supplement relating to the notes will set forth our estimate of the initial value of the notes as of the trade date, which will not be less than \$976.33 per \$1,000 in principal amount. The actual value of the notes at any time will reflect many factors, cannot be predicted with accuracy, and may be less than this amount. We describe our determination of the initial estimated value in more detail below.

Your investment in the notes involves certain risks, including, among other things, our credit risk. See the section “Additional Risk Factors Specific to Your Notes” beginning on page PS-7 of this pricing supplement.

The foregoing is only a brief summary of the terms of your notes. You should read the additional disclosure provided in this pricing supplement so that you may better understand the terms and risks of your investment.

Original issue date: , 2019

Original issue price: [100.00]% of the principal amount

Underwriting discount: [0.00]% of the principal amount Net proceeds to the issuer: [100.00]% of the principal amount

See “Supplemental Plan of Distribution (Conflicts of Interest)” on page PS-21 of this pricing supplement.

The issue price, underwriting discount and net proceeds listed above relate to the notes we sell initially. We may decide to sell additional notes after the date of this pricing supplement, at issue prices and with underwriting discounts and net proceeds that differ from the amounts set forth above. The return (whether positive or negative) on your investment in the notes will depend in part on the issue price you pay for such notes.

Neither the Securities and Exchange Commission nor any other regulatory body has approved or disapproved of the notes or passed upon the accuracy or adequacy of this pricing supplement, the accompanying product prospectus supplement, the accompanying prospectus supplement or the accompanying prospectus. Any representation to the contrary is a criminal offense. The notes will not constitute deposits that are 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. The notes are not subject to conversion into our common shares under subsection 39.2(2.3) of the Canada Deposit Insurance Corporation Act.

RBC Capital Markets, LLC

Pricing Supplement dated                      , 2019.

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## SUMMARY INFORMATION

We refer to the notes we are offering by this pricing supplement as the “offered notes” or the “notes.” Each of the offered notes, including your notes, has the terms described below. Please note that in this pricing supplement, references to “Royal Bank of Canada,” “we,” “our” and “us” mean only Royal Bank of Canada and all references to “\$” or “dollar” are to United States dollars. Also, references to the “accompanying prospectus” mean the accompanying prospectus, dated September 7, 2018, as supplemented by the accompanying prospectus supplement, dated September 7, 2018, of Royal Bank of Canada relating to the Senior Medium-Term Notes, Series H program of Royal Bank of Canada and references to the “accompanying product prospectus supplement PB-1” mean the accompanying product prospectus supplement PB-1, dated September 20, 2018, of Royal Bank of Canada.

This section is meant as a summary and should be read in conjunction with the section entitled “General Terms of the Notes” beginning on page PS-4 of the accompanying product prospectus supplement PB-1. Please note that certain features described in the accompanying product prospectus supplement PB-1 are not applicable to the notes. This pricing supplement supersedes any conflicting provisions of the accompanying product prospectus supplement PB-1.

### Key Terms

Issuer: Royal Bank of Canada

Underlier: the iShares® MSCI Emerging Markets ETF (Bloomberg symbol, “EEM UP Equity”)

Index: MSCI Emerging Markets Index

Specified currency: U.S. dollars (“\$”)

Denominations: \$1,000 and integral multiples of \$1,000 in excess of \$1,000. The notes may only be transferred in amounts of \$1,000 and increments of \$1,000 thereafter

Principal amount: each note will have a principal amount of \$1,000; \$ in the aggregate for all the offered notes; the aggregate principal amount of the offered notes may be increased if the issuer, at its sole option, decides to sell an additional amount of the offered notes on a date subsequent to the date of this pricing supplement

Purchase at amount other than principal amount: the amount we will pay you at the stated maturity date for your notes will not be adjusted based on the issue price you pay for your notes, so if you acquire notes at a premium (or discount) to principal amount and hold them to the stated maturity date, it could affect your investment in a number of ways. The return on your investment in such notes will be lower (or higher) than it would have been had you purchased the notes at a price equal to the principal amount. In addition, the buffer level would not offer the same measure of protection to your investment as would be the case if you had purchased the notes at the principal amount.

Additionally, the cap level would be triggered at a lower (or higher) percentage return than indicated below, relative to your initial investment. See “If the Original Issue Price for Your Notes Represents a Premium to the Principal Amount, the Return on Your Notes Will Be Lower Than the Return on Notes for Which the Original Issue Price Is Equal to the Principal Amount or Represents a Discount to the Principal Amount” on page PS-13 of this pricing supplement

Cash settlement amount (on the stated maturity date): for each \$1,000 principal amount of your notes, we will pay you on the stated maturity date an amount in cash equal to:

- if the final underlier level is greater than or equal to the cap level, the maximum settlement amount;
- if the final underlier level is greater than the initial underlier level but less than the cap level, the sum of (1) \$1,000 plus (2) the product of (i) \$1,000 times (ii) the upside participation rate times (iii) the underlier return;
- if the final underlier level is equal to or less than the initial underlier level but greater than or equal to the buffer level, \$1,000; or
- if the final underlier level is less than the buffer level, the sum of (1) \$1,000 plus (2) the product of (i) the buffer rate times (ii) the sum of the underlier return plus the buffer amount times (iii) \$1,000. In this case, the cash settlement amount will be less than the principal amount of the notes, and you will lose some or all of the principal amount.

Initial underlier level (to be set on the trade date and may be higher or lower than the actual closing price of the underlier on the trade date):

Final underlier level: the closing price of the underlier on the determination date, except in the limited circumstances described under “General Terms of the Notes — Determination Dates and Averaging Dates” on page PS-5 of the accompanying product prospectus supplement PB-1 and subject to adjustment as provided under “General Terms of the Notes — Unavailability of the Level of the Underlier” on page PS-6 of the accompanying product prospectus supplement PB-1 and as provided under “— Anti-dilution Adjustments for Exchange Traded Funds” on page PS-9 of the accompanying product prospectus supplement PB-1.

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Underlier return: the quotient of (1) the final underlier level minus the initial underlier level divided by (2) the initial underlier level, expressed as a percentage

Upside participation rate: 150%

Cap level (to be set on the trade date): expected to be between 118.01% and 121.13% of the initial underlier level

Maximum settlement amount (to be set on the trade date): for each \$1,000 principal amount of the notes, expected to be between \$1,270.15 and \$1,316.95

Buffer level: 87.50% of the initial underlier level (equal to an underlier return of -12.50%)

PS-2

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Buffer amount: 12.50%

Buffer rate: the quotient of the initial underlier level divided by the buffer level, which equals approximately 114.29%

Trade date:

Original issue date (settlement date) (to be set on the trade date): expected to be the fifth scheduled business day following the trade date

Determination date (to be set on the trade date): a specified date that is expected to be between 19 and 22 months after the trade date, subject to adjustment as described under “General Terms of the Notes — Determination Dates and Averaging Dates” on page PS-5 of the accompanying product prospectus supplement PB-1

Stated maturity date (to be set on the trade date): a specified date that is expected to be the second scheduled business day after the determination date, subject to adjustment as described under “General Terms of the Notes — Stated Maturity Date” on page PS-5 of the accompanying product prospectus supplement PB-1

No interest: the offered notes will not bear interest

No listing: the offered notes will not be listed on any securities exchange or interdealer quotation system

No redemption: the notes are not subject to redemption prior to maturity

Closing price: the closing sale price or last reported sale price, regular way, for the underlier, on a per-share or other unit basis:

· on the principal national securities exchange on which that underlier is listed for trading on that day, or  
· if the underlier is not listed on any national securities exchange, on that day, on any other U.S. national market system that is the primary market for the trading of that underlier.

If the underlier is not listed or traded as described above, then the closing price on any day will be the average, as determined by the calculation agent, of the bid prices for the underlier obtained from as many dealers in that underlier selected by the calculation agent as will make those bid prices available to the calculation agent. The number of dealers need not exceed three and may include the calculation agent or any of its or our affiliates.

Business day: as described under “General Terms of the Notes — Special Calculation Provisions — Business Day” on page PS-11 of the accompanying product prospectus supplement PB-1

Trading day: as described under “General Terms of the Notes — Special Calculation Provisions — Trading Day— ETFs” on page PS-11 of the accompanying product prospectus supplement PB-1

Use of proceeds and hedging: as described under “Use of Proceeds and Hedging” on page PS-13 of the accompanying product prospectus supplement PB-1

ERISA: as described under “Employee Retirement Income Security Act” on page PS-20 of the accompanying product prospectus supplement PB-1

Calculation agent: RBC Capital Markets, LLC (“RBCCM”)

Dealer: RBCCM

U.S. tax treatment: by purchasing a note, each holder agrees (in the absence of a change in law, an administrative determination or a judicial ruling to the contrary) to treat the note as a pre-paid cash-settled derivative contract for U.S. federal income tax purposes. However, the U.S. federal income tax consequences of your investment in the notes are uncertain and the Internal Revenue Service could assert that the notes should be taxed in a manner that is different from that described in the preceding sentence. Please see the discussion in the accompanying prospectus under “Tax Consequences,” the discussion in the accompanying prospectus supplement under “Certain Income Tax Consequences,” and the discussion (including the opinion of our counsel Morrison & Foerster LLP) in the accompanying product prospectus supplement PB-1 under “Supplemental Discussion of U.S. Federal Income Tax Consequences,” and the discussion below under “Supplemental Discussion of U.S. Federal Income Tax Consequences,” which apply to the notes.

Canadian tax treatment: for a discussion of certain Canadian federal income tax consequences of investing in the notes, please see the section entitled “Tax Consequences – Canadian Taxation” in the accompanying prospectus

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FDIC: the notes will not constitute deposits that are insured by the Federal Deposit Insurance Corporation, the Canada Deposit Insurance Corporation or any other Canadian or U.S. governmental agency

Indenture: the notes will be issued under our senior debt indenture, as amended and supplemented through September 7, 2018, which is described in the accompanying prospectus. Please see the section “Description of Debt Securities”

beginning on page 4 of the prospectus for a description of the senior debt indenture, including the limited circumstances that would constitute an event of default under the notes that we are offering

The trade date, the determination date and the stated maturity date are subject to change. These dates will be set forth in the final pricing supplement that will be made available in connection with sales of the notes.

PS-3

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## HYPOTHETICAL EXAMPLES

The following table and chart are provided for purposes of illustration only. They should not be taken as an indication or prediction of future investment results and are intended merely to illustrate the impact that various hypothetical final underlier levels on the determination date could have on the cash settlement amount at maturity, assuming all other variables remain constant.

The examples below are based on a range of final underlier levels that are entirely hypothetical. No one can predict what the underlier level will be on any day during the term of your notes, and no one can predict what the final underlier level will be. The underlier has been highly volatile in the past—meaning that the underlier level has changed considerably in relatively short periods—and its performance cannot be predicted for any future period.

The information in the following examples reflects hypothetical rates of return on the notes assuming that they are purchased on the original issue date with a \$1,000 principal amount and are held to maturity. If you sell your notes in any secondary market prior to maturity, your return will depend upon the market value of your notes at the time of sale, which may be affected by a number of factors that are not reflected in the table below, such as interest rates and the volatility of the underlier. In addition, assuming no changes in market conditions or our creditworthiness and any other relevant factors, the value of your notes on the trade date (as determined by reference to pricing models used by RBCCM and taking into account our credit spreads) will be, and the price you may receive for your notes may be, significantly less than the principal amount. For more information on the value of your notes in the secondary market, see “Additional Risk Factors Specific to Your Notes — The Price, if Any, at Which You May Be Able to Sell Your Notes Prior to Maturity May Be Less than the Original Issue Price and Our Initial Estimated Value” below. The information in the table also reflects the key terms and assumptions in the box below.

### Key Terms and Assumptions

|                                        |                                        |
|----------------------------------------|----------------------------------------|
| Principal amount                       | \$1,000                                |
| Upside participation rate              | 150%                                   |
| Hypothetical cap level                 | 118.01% of the initial underlier level |
| Hypothetical maximum settlement amount | \$1,270.15                             |
| Buffer level                           | 87.50% of the initial underlier level  |
| Buffer rate                            | , which equals approximately 114.29%   |
| Buffer amount                          | 12.50%                                 |

Neither a market disruption event nor a non-trading day occurs on the originally scheduled determination date

No change in or affecting the underlier or the policies affecting the underlier or of the underlier’s investment advisor or the method by which MSCI Inc. (“MSCI” or the “index sponsor”) calculates the MSCI Emerging Markets Index (the “index”).

Notes purchased on original issue date at a price equal to the principal amount and held to the stated maturity date

Moreover, we have not yet set the initial underlier level that will serve as the baseline for determining the underlier return and the amount that we will pay on your notes, if any, at maturity. We will not do so until the trade date. As a result, the actual initial underlier level may differ substantially from the underlier level prior to the trade date and may be higher or lower than the actual closing price of the underlier on the trade date.

For these reasons, the actual performance of the underlier over the term of your notes, as well as the amount payable at maturity, if any, may bear little relation to the hypothetical examples shown below or to the historical underlier levels shown elsewhere in this pricing supplement. For information about the historical levels of the underlier during recent periods, see “The Underlier—Historical Performance of the Underlier” below. Before investing in the notes, you should consult publicly available information to determine the prices of the underlier between the date of this pricing supplement and the date of your purchase of the notes.

Also, the hypothetical examples shown below do not take into account the effects of applicable taxes. Because of the U.S. tax treatment applicable to your notes, tax liabilities could affect the after-tax rate of return on your notes to a comparatively greater extent than the after-tax return on the stocks held by the underlier (the “underlier stocks”).

The levels in the left column of the table below represent hypothetical final underlier levels and are expressed as percentages of the initial underlier level. The amounts in the right column represent the hypothetical cash settlement amounts, based on the corresponding hypothetical final underlier level (expressed as a percentage of the initial underlier level), and are expressed as percentages of the principal amount of a note (rounded to the nearest one-thousandth of a percent). Thus, a hypothetical cash settlement amount of 100.000% means that the value of the cash payment that we would deliver for each \$1,000 principal amount of the notes at maturity would equal the principal amount of a note, based on the corresponding hypothetical final underlier level (expressed as a percentage of the initial underlier level) and the assumptions noted above.

PS-4

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| Hypothetical Final Underlier Level (as a Percentage of the Initial Underlier Level) | Hypothetical Cash Settlement Amount (as a Percentage of the Principal Amount) |
|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------|
| 150.000%                                                                            | 127.015%                                                                      |
| 140.000%                                                                            | 127.015%                                                                      |
| 130.000%                                                                            | 127.015%                                                                      |
| 120.000%                                                                            | 127.015%                                                                      |
| 118.010%                                                                            | 127.015%                                                                      |
| 110.000%                                                                            | 115.000%                                                                      |
| 107.000%                                                                            | 110.500%                                                                      |
| 105.000%                                                                            | 107.500%                                                                      |
| 100.000%                                                                            | 100.000%                                                                      |
| 95.000%                                                                             | 100.000%                                                                      |
| 87.500%                                                                             | 100.000%                                                                      |
| 80.000%                                                                             | 91.429%                                                                       |
| 75.000%                                                                             | 85.714%                                                                       |
| 50.000%                                                                             | 57.143%                                                                       |
| 25.000%                                                                             | 28.571%                                                                       |
| 0.000%                                                                              | 0.000%                                                                        |

If, for example, the final underlier level were determined to be 25.000% of the initial underlier level, the cash settlement amount that we would deliver on your notes at maturity would be approximately 28.571% of the principal amount of your notes, as shown in the hypothetical cash settlement amount column of the table above. As a result, if you purchased your notes at the principal amount on the settlement date and held them to maturity, you would lose approximately 71.429% of your investment.

If the final underlier level were determined to be 150.000% of the initial underlier level, the cash settlement amount that we would deliver on your notes at maturity would be capped at the maximum settlement amount (expressed as a percentage of the principal amount), or 127.015% of the principal amount of your notes, as shown in the hypothetical cash settlement amount column of the table above. As a result, if you purchased your notes at the principal amount on the settlement date and held them to maturity, you would not benefit from any increase in the final underlier level over 118.010% of the initial underlier level.

PS-5

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The following chart also illustrates the hypothetical cash settlement amounts (expressed as a percentage of the principal amount of your notes) that we would pay on your notes on the stated maturity date, if the final underlier level (expressed as a percentage of the initial underlier level) were any of the hypothetical levels shown on the horizontal axis. The chart shows that any hypothetical final underlier level (expressed as a percentage of the initial underlier level) of less than the buffer level would result in a hypothetical cash settlement amount of less than 100.00% of the principal amount of your notes (the section below the 100.00% marker on the vertical axis) and, accordingly, in a loss of principal to the holder of the notes. On the other hand, any hypothetical final underlier level that is greater than the initial underlier level (the section right of the 100.00% marker on the horizontal axis) would result in a hypothetical cash settlement amount that is greater than 100.00% of the principal amount of your notes on a leveraged basis (the section above the 100.00% marker on the vertical axis), subject to the maximum settlement amount.

#### n The Note Performance n The Underlier Performance

No one can predict what the final underlier level will be. The actual amount that a holder of the notes will receive at maturity and the actual return on your investment in the notes, if any, will depend on the initial underlier level, the stated maturity date, the cap level and the maximum settlement amount that will be set on the trade date and the actual final underlier level determined by the calculation agent as described below. In addition, the actual return on your notes will further depend on the original issue price. Moreover, the assumptions on which the hypothetical table and chart are based may turn out to be inaccurate. Consequently, the return on your investment in the notes, if any, and the actual cash settlement amount to be paid in respect of the notes at maturity may be very different from the information reflected in the table and chart above.

PS-6

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## ADDITIONAL RISK FACTORS SPECIFIC TO YOUR NOTES

An investment in your notes is subject to the risks described below, as well as the risks described under “Risk Factors” beginning on page S-1 of the accompanying prospectus supplement and page 1 of the accompanying prospectus.

You should carefully review these risks as well as the terms of the notes described herein and in the accompanying prospectus, dated September 7, 2018, as supplemented by the accompanying prospectus supplement, dated September 7, 2018, and the accompanying product prospectus supplement PB-1, dated September 20, 2018, of Royal Bank of Canada. Your notes are a riskier investment than ordinary debt securities. Also, your notes are not equivalent to investing directly in the underlier stocks, i.e., the stocks held by the underlier. You should carefully consider whether the offered notes are suited to your particular circumstances.

### You May Lose Your Entire Investment in the Notes

The principal amount of your investment is not protected and you may lose a significant amount, or even all of your investment in the notes. The cash settlement amount, if any, will depend on the performance of the underlier and the change in the price of the underlier from the trade date to the determination date, and you may receive significantly less than the principal amount of the notes. Subject to our credit risk, you will receive at least the principal amount of the notes at maturity only if the final underlier level is greater than or equal to the buffer level. If the final underlier level is less than the buffer level, then you will lose, for each \$1,000 in principal amount of the notes, an amount equal to the product of (i) the buffer rate times (ii) the sum of underlier return plus the buffer amount times (iii) \$1,000. You could lose some or all of the principal amount. Thus, depending on the final underlier level, you could lose a substantial portion, and perhaps all, of your investment in the notes, which would include any premium to the principal amount you may have paid when you purchased the notes.

In addition, if the notes are not held until maturity, assuming no changes in market conditions or to our creditworthiness and other relevant factors, the price you may receive for the notes may be significantly less than the price that you paid for them.

### Our Initial Estimated Value of the Notes Will Be Less than the Original Issue Price

Our initial estimated value that is set forth on the cover page of this document, and that will be set forth in the final pricing supplement for the notes, will be less than the original issue price of the notes, and does not represent a minimum price at which we, RBCCM or any of our other affiliates would be willing to purchase the notes in any secondary market (if any exists) at any time. This is due to, among other things, the fact that the original issue price of the notes reflects the borrowing rate we pay to issue securities of this kind (an internal funding rate that is lower than the rate at which we borrow funds by issuing conventional fixed rate debt), and the inclusion in the original issue price of the costs relating to our hedging of the notes.

### The Price, if Any, at Which You May Be Able to Sell Your Notes Prior to Maturity May Be Less than the Original Issue Price and Our Initial Estimated Value

Assuming no change in market conditions or any other relevant factors, the price, if any, at which you may be able to sell your notes prior to maturity may be less than the original issue price and our initial estimated value. This is because any such sale price would not be expected to include our estimated profit and the costs relating to our hedging of the notes. In addition, any price at which you may sell the notes is likely to reflect customary bid-ask spreads for similar trades, and the cost of unwinding any related hedge transactions. In addition, the value of the notes determined for any secondary market price is expected to be based in part on the yield that is reflected in the interest rate on our conventional debt securities of similar maturity that are traded in the secondary market, rather than the internal funding rate that we used to price the notes and determine the initial estimated value. As a result, the secondary market price of the notes will be less than if the internal funding rate was used. These factors, together with various credit, market and economic factors over the term of the notes, and, potentially, changes in the price of the underlier, are expected to reduce the price at which you may be able to sell the notes in any secondary market and will affect the value of the notes in complex and unpredictable ways.

As set forth below in the section “Supplemental Plan of Distribution (Conflicts of Interest),” for a limited period of time after the trade date, your broker may repurchase the notes at a price that is greater than the estimated value of the notes at that time. However, assuming no changes in any other relevant factors, the price you may receive if you sell your notes is expected to decline gradually during that period.

The notes are not designed to be short-term trading instruments. Accordingly, you should be able and willing to hold your notes to maturity.

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

Our initial estimated value of the notes is based on the value of our obligation to make the payments on the notes, together with the mid-market value of the derivative embedded in the terms of the notes. See “Structuring the Notes” below. Our estimate is based on a variety of assumptions, including our internal funding rate (which represents a discount from our credit spreads), expectations as to dividends on the underlier stocks, interest rates and volatility, and the expected term of the notes. These assumptions are based on certain forecasts about future events, which may prove to be incorrect. Other entities may value the notes or similar securities at a price that is significantly different than we do.

The value of the notes at any time after the trade date will vary based on many factors, including changes in market conditions, and cannot be predicted with accuracy. As a result, the actual value you would receive if you sold the notes in any secondary market, if any, should be expected to differ materially from our initial estimated value of your notes.

PS-7

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#### Your Notes Will Not Bear Interest

You will not receive any interest payments on the notes. Even if the amount payable on the notes at maturity exceeds the principal amount of the notes, the overall return you earn on the notes may be less than you would otherwise have earned by investing in a non-indexed debt security of comparable maturity that bears interest at a prevailing market rate. Your investment may not reflect the full opportunity cost to you when you take into account factors that affect the time value of money.

#### The Potential for the Value of Your Notes to Increase Will Be Limited

Your ability to participate in any change in the price of the underlier over the term of your notes will be limited because of the cap level. The cap level will limit the amount in cash you may receive for each of your notes at maturity, no matter how much the price of the underlier may rise beyond the cap level over the term of your notes. Accordingly, the amount payable for each of your notes may be significantly less than your return had you invested directly in the underlier.

#### Payment of the Amount Payable on Your Notes Is Subject to Our Credit Risk, and Market Perceptions About Our Creditworthiness May Adversely Affect the Market Value of Your Notes

The notes are our unsecured debt obligations. Investors are subject to our credit risk, and market perceptions about our creditworthiness may adversely affect the market value of the notes. Any decrease in the market's view on or confidence in our creditworthiness is likely to adversely affect the market value of the notes.

#### The Amount Payable on Your Notes Is Not Linked to the Price of the Underlier at Any Time Other than the Determination Date

The amount payable on your notes will be based on the final underlier level. Therefore, for example, if the price of the underlier decreased precipitously on the determination date, the amount payable at maturity may be significantly less than it would otherwise have been had the amount payable been linked to the price of the underlier prior to that decrease. Although the actual price of the underlier at maturity or at other times during the term of the notes may be higher than the final underlier level, you will not benefit from the price of the underlier at any time other than the determination date.

#### The Notes May Not Have an Active Trading Market

The notes will not be listed on any securities exchange. The dealer intends to offer to purchase the notes in the secondary market, but is not required to do so. The dealer or any of its affiliates may stop any market-making activities at any time. Even if there is a secondary market, it may not provide enough liquidity to allow you to easily trade or sell the notes. Because other dealers are not likely to make a secondary market for the notes, the price at which you may be able to trade the notes is likely to depend on the price, if any, at which the dealer is willing to buy the notes. We expect that transaction costs in any secondary market would be high. As a result, the difference between bid and asked prices for your notes in any secondary market could be substantial.

If you sell your notes before maturity, you may have to do so at a substantial discount from the price that you paid for them, and as a result, you may suffer substantial losses.

#### The Market Value of Your Notes May Be Influenced by Many Unpredictable Factors

The following factors, among others, many of which are beyond our control, may influence the market value of your notes:

- the price of the underlier;
- the volatility—i.e., the frequency and magnitude of changes—of the price of the underlier;
- the dividend rates of the underlier stocks;
- economic, financial, regulatory, political, military and other events that affect stock markets generally and the underlier stocks;
- interest and yield rates in the market;
  - the time remaining until the notes mature; and
- our creditworthiness, whether actual or perceived, and including actual or anticipated upgrades or downgrades in our credit ratings or changes in other credit measures.

These factors may influence the market value of your notes if you sell your notes before maturity, including the price you may receive for your notes in any market making transaction. If you sell your notes prior to maturity, you may receive less than the principal amount of your notes.

**If the Price of the Underlier or the Underlier Stocks Changes, the Market Value of the Notes May Not Change in the Same Manner**

The notes may trade quite differently from the performance of the underlier or the underlier stocks. Changes in the price of the underlier or the underlier stocks may not result in a comparable change in the market value of the notes. Some of the reasons for this disparity are discussed under “— The Market Value of Your Notes May Be Influenced by Many Unpredictable Factors” above.

**The Return on the Notes Will Not Reflect Any Dividends Paid on the Underlier or the Underlier Stocks**

You will not receive any dividends that may be paid on the underlier, or that may be paid on any of the underlier stocks. See “You Have No Shareholder Rights or Rights to Receive Any Shares of the Underlier or Any Underlier Stocks” below for additional information. Therefore, the return on the notes will not reflect the return you would realize if you actually owned shares of the underlier or the underlier stocks and received the dividends paid on those securities.

PS-8

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**You Have No Shareholder Rights or Rights to Receive Any Shares of the Underlier or Any Underlier Stocks**

Investing in your notes will not make you a holder of shares of the underlier, any of the underlier stocks or any of the stocks underlying the index. Neither you nor any other holder or owner of your notes will have any voting rights, any right to receive dividends or other distributions, any rights to make a claim against the issuers of those securities or any other rights with respect to those securities. Your notes will be paid in cash to the extent any amount is payable at maturity, and you will have no right to receive delivery of any of those securities.

**We Will Not Hold Any Shares of the Underlier or the Underlier Stocks for Your Benefit, if We Hold Them at All**

The indenture and the terms governing your notes do not contain any restriction on our ability or the ability of any of our affiliates to sell, pledge or otherwise convey all or any portion of the shares of the underlier or the underlier stocks that we or they may acquire. Neither we nor our affiliates will pledge or otherwise hold any assets for your benefit, including any of these securities. Consequently, in the event of our bankruptcy, insolvency or liquidation, any of those securities that we own will be subject to the claims of our creditors generally and will not be available for your benefit specifically.

**Our Hedging Activities and/or Those of Our Distributors May Negatively Impact Investors in the Notes and Cause Our Interests and Those of Our Clients and Counterparties to Be Contrary to Those of Investors in the Notes**

The dealer or one or more of our other affiliates and/or distributors expects to hedge its obligations under the hedging transaction that it may enter into with us by purchasing futures and/or other instruments linked to the underlier, the underlier stocks or the securities included in the index. The dealer or one or more of our other affiliates and/or distributors also expects to adjust the hedge by, among other things, purchasing or selling any of the foregoing, and perhaps other instruments linked to these securities at any time and from time to time, and to unwind the hedge by selling any of the foregoing on or before the determination date.

We, the dealer, or one or more of our other affiliates and/or distributors may also enter into, adjust and unwind hedging transactions relating to other notes whose returns are linked to changes in the price of the underlier or the underlier stocks or the composition of the index. Any of these hedging activities may adversely affect the price of the underlier—directly or indirectly by affecting the price of the underlier stocks—and therefore the market value of the notes and the amount you will receive, if any, on the notes. In addition, you should expect that these transactions will cause us, the dealer or our other affiliates and/or distributors, or our clients or counterparties, to have economic interests and incentives that do not align with, and that may be directly contrary to, those of an investor in the notes. We, the dealer and our other affiliates and/or distributors will have no obligation to take, refrain from taking or cease taking any action with respect to these transactions based on the potential effect on an investor in the notes, and may receive substantial returns with respect to these hedging activities while the value of the notes may decline. Additionally, if the distributor from which you purchase notes is to conduct hedging activities for us in connection with the notes, that distributor may profit in connection with such hedging activities and such profit, if any, will be in addition to the compensation that the distributor receives for the sale of the notes to you. You should be aware that the potential to earn fees in connection with hedging activities may create a further incentive for the distributor to sell the notes to you in addition to the compensation they would receive for the sale of the notes.

**Market Activities by Us and by the Dealer for Our Own Account or for Our Clients Could Negatively Impact Investors in the Notes**

We, the dealer and our other affiliates provide a wide range of financial services to a substantial and diversified client base. As such, we each may act as an investor, investment banker, research provider, investment manager, investment advisor, market maker, trader, prime broker or lender. In those and other capacities, we, the dealer and/or our other affiliates purchase, sell or hold a broad array of investments, actively trade securities (including the notes or other securities that we have issued), shares of the underlier, the underlier stocks, derivatives, loans, credit default swaps, indices, baskets and other financial instruments and products for our own accounts or for the accounts of our customers, and we will have other direct or indirect interests, in those securities and in other markets that may be not be consistent with your interests and may adversely affect the price of the underlier and/or the value of the notes. Any of these financial market activities may, individually or in the aggregate, have an adverse effect on the price of the underlier and the market value of your notes, and you should expect that our interests and those of the dealer and/or our other affiliates, or our clients or counterparties, will at times be adverse to those of investors in the notes. In addition to entering into these transactions itself, we, the dealer and our other affiliates may structure these transactions for our clients or counterparties, or otherwise advise or assist clients or counterparties in entering into

these transactions. These activities may be undertaken to achieve a variety of objectives, including: permitting other purchasers of the notes or other securities to hedge their investment in whole or in part; facilitating transactions for other clients or counterparties that may have business objectives or investment strategies that are inconsistent with or contrary to those of investors in the notes; hedging the exposure of us, the dealer or our other affiliates in connection with the notes, through their market-making activities, as a swap counterparty or otherwise; enabling us, the dealer or our other affiliates to comply with internal risk limits or otherwise manage firmwide, business unit or product risk; and/or enabling us, the dealer or our other affiliates to take directional views as to relevant markets on behalf of itself or our clients or counterparties that are inconsistent with or contrary to the views and objectives of investors in the notes.

We, the dealer and our other affiliates regularly offer a wide array of securities, financial instruments and other products into the marketplace, including existing or new products that are similar to the notes or other securities that we may issue, shares of the underlier, the underlier stocks or other securities or instruments similar to or linked to the foregoing. Investors in the notes should expect that we, the dealer and our other affiliates will offer securities, financial instruments, and other products that may compete with the notes for liquidity or otherwise.

PS-9

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We, the Dealer and Our Other Affiliates Regularly Provide Services to, or Otherwise Have Business Relationships with, a Broad Client Base, Which Has Included and May Include Us and the Issuers of the Underlier Stocks

We, the dealer and our other affiliates regularly provide financial advisory, investment advisory and transactional services to a substantial and diversified client base. You should assume that we or they will, at present or in the future, provide such services or otherwise engage in transactions with, among others, us and the issuers of the underlier stocks, or transact in securities or instruments or with parties that are directly or indirectly related to these entities. These services could include making loans to or equity investments in those companies, providing financial advisory or other investment banking services, or issuing research reports. You should expect that we, the dealer and our other affiliates, in providing these services, engaging in such transactions, or acting for our own accounts, may take actions that have direct or indirect effects on the notes or other securities that we may issue, the underlier, the underlier stocks or other securities or instruments similar to or linked to the foregoing, and that such actions could be adverse to the interests of investors in the notes. In addition, in connection with these activities, certain personnel within us, the dealer or our other affiliates may have access to confidential material non-public information about these parties that would not be disclosed to investors of the notes.

#### Past Underlier Performance Is No Guide to Future Performance

The actual performance of the underlier over the term of the notes may bear little relation to the historical levels of the underlier. Likewise, the amount payable at maturity may bear little relationship to the hypothetical return table or chart set forth elsewhere in this pricing supplement. We cannot predict the future performance of the underlier.

Trading activities undertaken by market participants, including certain investors in the notes or their affiliates, including in short positions and derivative positions, may adversely affect the price of the underlier.

#### As the Calculation Agent, RBCCM Will Have the Authority to Make Determinations that Could Affect the Amount You Receive, if Any, at Maturity

As the calculation agent for the notes, RBCCM will have discretion in making various determinations that affect the notes, including determining the final underlier level, and specifically whether and how to make anti-dilution adjustments to the final underlier level, which will be used to determine the cash settlement amount at maturity, and determining whether to postpone the determination date because of a market disruption event or because that day is not a trading day. The calculation agent also has discretion in making certain adjustments relating to a discontinuation or modification of the underlier, as described under “General Terms of the Notes—Unavailability of the Level of the Underlier” on page PS-6 of the accompanying product prospectus supplement PB-1 and under “General Terms of the Notes—Anti-dilution Adjustments for Exchange Traded Funds” on page PS-9 of the accompanying product prospectus supplement PB-1. The exercise of this discretion by RBCCM, which is our wholly owned subsidiary, could adversely affect the value of the notes and may create a conflict of interest between you and RBCCM. For a description of market disruption events as well as the consequences of the market disruption events, see the section entitled “General Terms of the Notes—Market Disruption Events” beginning on page PS-7 of the accompanying product prospectus supplement PB-1. We may change the calculation agent at any time without notice, and RBCCM may resign as calculation agent at any time.

#### The Policies of the Underlier’s Investment Advisor, BlackRock Fund Advisors, and MSCI, the Sponsor of the Index, Could Affect the Amount Payable on the Notes, if Any, and Their Market Value

The underlier’s investment advisor, BlackRock Fund Advisors (“BFA,” or the “investment advisor”) may from time to time make certain decisions or judgments with respect to the implementation of policies concerning the calculation of the net asset value of the underlier, additions, deletions or substitutions of the underlier stocks, and the manner in which changes affecting the index are reflected in the underlier. These decisions or judgments could affect the market price of the shares of the underlier and, therefore, the amount payable on the notes, if any, at maturity and the market value of the notes prior to maturity. The amount payable on the notes, if any, and their market value could also be affected if the investment advisor discontinues or suspends calculation or publication of the net asset value of the underlier, in which case it may become difficult to determine the market value of the notes. If events such as these occur, the calculation agent will determine the amount payable, if any, at maturity as described herein and in the product prospectus supplement.

In addition, the index sponsor publishes the index and is responsible for the design and maintenance of the index. The policies of the index sponsor concerning the calculation of the index, including decisions regarding the addition, deletion or substitution of the securities included in the index, could affect the market prices of shares of the underlier

and, therefore, the amount payable on your notes and their market value.

**There Are Risks Associated with the Underlier**

Although the underlier's shares are listed for trading on NYSE Arca and a number of similar products have been traded on the NYSE Arca or other securities exchanges for varying periods of time, there is no assurance that an active trading market will continue for the shares of the underlier or that there will be liquidity in the trading market.

In addition, the underlier is subject to management risk, which is the risk that the investment advisor's investment strategy, the implementation of which is subject to a number of constraints, may not produce the intended results. For example, the investment advisor may select up to 10% of the underlier's assets to be invested in shares of equity securities that are not included in the index. The underlier is also not actively managed and may be affected by a general decline in market segments relating to the index. The investment advisor invests in securities included in, or representative of, the index regardless of their investment merits. The investment advisor does not attempt to take defensive positions in declining markets.

In addition, the underlier is subject to custody risk, which refers to the risks in the process of clearing and settling trades and to the holding of securities by local banks, agent and depositories. Low trading volumes and volatile prices in less developed markets make trades harder to complete and settle, and governments or trade groups may compel local agents

PS-10

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to hold securities in designated depositories that are not subject to independent evaluation. The less developed a country's securities market is, the greater the likelihood of custody problems.

Further, under continuous listing standards adopted by the NYSE Arca, the underlier will be required to confirm on an ongoing basis that the components of the index satisfy the applicable listing requirements. In the event that the index does not comply with the applicable listing requirements, the underlier would be required to rectify such non-compliance by requesting that the index sponsor modify such index, adopting a new index or obtaining relief from the Securities and Exchange Commission. There can be no assurance that the index sponsor would so modify the index or that relief would be obtained from the Securities and Exchange Commission and, therefore, non-compliance with the continuous listing standards may result in the underlying ETF being delisted by the NYSE Arca.

The Underlier and the Index are Different and the Performance of the Underlier May Not Correlate with the Performance of the Index

The underlier uses a representative sampling strategy (more fully described under "The Underlier") to attempt to track the performance of the index. The underlier may not hold all or substantially all of the equity securities included in the index and may hold securities or assets not included in the index. Therefore, while the performance of the underlier is generally linked to the performance of the index, the performance of the underlier is also linked in part to shares of equity securities not included in the index and to the performance of other assets, such as futures contracts, options and swaps, as well as cash and cash equivalents, including shares of money market funds affiliated with the underlier's investment advisor.

Imperfect correlation between the underlier's portfolio securities and those in the index, rounding of prices, changes to the index and regulatory requirements may cause tracking error, which is the divergence of the underlier's performance from that of the index.

In addition, the performance of the underlier will reflect additional transaction costs and fees that are not included in the calculation of the index; this may increase the tracking error of the underlier. Also, corporate actions with respect to the sample of equity securities (such as mergers and spin-offs) may impact the performance differential between the underlier and the index. Finally, because the shares of the underlier are traded on the NYSE Arca and are subject to market supply and investor demand, the market value of one share of the underlier may differ from the net asset value per share of the underlier.

For all of the foregoing reasons, the performance of the underlier may not correlate with the performance of the index. Consequently, the return on the notes will not be the same as investing directly in the underlier, the index or the underlier stocks, and will not be the same as investing in a debt security with a payment at maturity linked to the performance of the index.

An Investment in the Notes Is Subject to Risks Associated with Foreign Securities Markets

The underlier holds stocks traded in certain emerging markets. You should be aware that investments in securities linked to the value of foreign equity securities involve particular risks. These foreign securities markets may have less liquidity and may be more volatile than U.S. or other securities markets and market developments may affect foreign markets differently from U.S. or other securities markets. Direct or indirect government intervention to stabilize these foreign securities markets, as well as cross-shareholdings in foreign companies, may affect trading prices and volumes in these markets. Also, there is generally less publicly available information about foreign companies than about those U.S. companies that are subject to the reporting requirements of the U.S. Securities and Exchange Commission, and foreign companies are subject to accounting, auditing and financial reporting standards and requirements that differ from those applicable to U.S. reporting companies.

Prices of securities in foreign countries are subject to political, economic, financial and social factors that apply in those geographical regions. These factors, which could negatively affect those securities markets, include the possibility of changes in a foreign government's economic and fiscal policies, the possible imposition of, or changes in, currency exchange laws or other laws or restrictions applicable to foreign companies or investments in foreign equity securities and the possibility of fluctuations in the rate of exchange between currencies, the possibility of outbreaks of hostility and political instability and the possibility of natural disasters or adverse public health developments in the region. Moreover, foreign economies may differ favorably or unfavorably from the U.S. economy in important respects such as growth of gross national product, rate of inflation, capital reinvestment, resources and self-sufficiency.

Because foreign exchanges may be open on days when the underlier is not traded, the value of the securities underlying the underlier may change on days when shareholders will not be able to purchase or sell shares of the underlier. Accordingly, the value of the shares held by the underlier may decrease before that decrease is reflected in the market price of the shares of the underlier, and before you become aware of that decrease.

Countries with emerging markets may have relatively unstable governments, may present the risks of nationalization of businesses, restrictions on foreign ownership and prohibitions on the repatriation of assets, and may have less protection of property rights than more developed countries. The economies of countries with emerging markets may be based on only a few industries, may be highly vulnerable to changes in local or global trade conditions, and may suffer from extreme and volatile debt burdens or inflation rates. 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. It will also likely be more costly and difficult for the underlier's investment advisor to enforce the laws or regulations of a foreign country or trading facility, and it is possible that the foreign country or trading facility may not have laws or regulations which adequately protect the rights and interests of investors in the underlier stocks.

#### The Notes Will Be Subject to Foreign Currency Exchange Rate Risk

The underlier holds certain stocks that are denominated in currencies other than the U.S. dollar. In calculating the underlier's net asset value, the price of the underlier stocks denominated in those currencies will be adjusted to reflect their U.S. dollar value by converting their price from the non-U.S. dollar currency to U.S. dollars. Consequently, if the value

of the U.S. dollar strengthens against the non-U.S. dollar currency in which a stock held by the underlier is denominated, the price of the underlier may decrease even if the market price of that stock held by the underlier, as measured in the applicable non-U.S. dollar currency, increases over the life of your notes.

Foreign currency exchange rates vary over time, and may vary considerably during the life of the notes. Changes in a particular exchange rate result from the interaction of many factors directly or indirectly affecting economic and political conditions. Of particular importance are:

- existing and expected rates of inflation;
- existing and expected interest rate levels;
- the balance of payments;
- the extent of governmental surpluses or deficits in the relevant countries; and
- other financial, economic, military and political factors.

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

The price of the notes and payment on the stated maturity date could also be adversely affected by delays in, or refusals to grant, any required governmental approval for conversions of a local currency and remittances abroad with respect to an underlier stock or other de facto restrictions on the repatriation of U.S. dollars.

In addition, it has been reported that the U.K. Financial Conduct Authority and regulators from other countries are in the process of investigating the potential manipulation of published currency exchange rates. If such manipulation has occurred or is continuing, certain published exchange rates may have been, or may be in the future, artificially lower (or higher) than they would otherwise have been. Any such manipulation could have an adverse impact on any payments on, and the value of, your notes and the trading market for your notes. In addition, we cannot predict whether any changes or reforms affecting the determination or publication of exchange rates or the supervision of currency trading will be implemented in connection with these investigations. Any such changes or reforms could also adversely impact your notes.

**The Calculation Agent Can Postpone the Determination of the Final Underlier Level if a Market Disruption Event Occurs or Is Continuing**

The determination of the final underlier level may be postponed if the calculation agent determines that a market disruption event has occurred or is continuing on the determination date with respect to the underlier. If such a postponement occurs, the calculation agent will use the closing price of the underlier on the first subsequent trading day on which no market disruption event occurs or is continuing, subject to the limitations set forth in the accompanying product prospectus supplement PB-1. If a market disruption event occurs or is continuing on a determination date, the stated maturity date for the notes could also be postponed.

If the determination of the price of the underlier for any determination date is postponed to the last possible day, but a market disruption event occurs or is continuing on that day, that day will nevertheless be the date on which the price of the underlier will be determined by the calculation agent. In such an event, the calculation agent will make a good faith estimate in its sole discretion of the price that would have prevailed in the absence of the market disruption event. See “General Terms of the Notes—Market Disruption Events” in the accompanying product prospectus supplement PB-1.

**There Is No Affiliation Between the Underlier Stock Issuers or the Underlier’s Investment Advisor and Us or the Dealer, and Neither We Nor the Dealer Is Responsible for Any Disclosure by Any of the Underlier Stock Issuers or the Underlier’s Investment Advisor**

We are not affiliated with the issuers of the underlier stocks or with the sponsor of the underlier. As discussed herein, however, we, the dealer, and our other affiliates may currently, or from time to time in the future, engage in business with the issuers of the underlier stocks. Nevertheless, none of us, the dealer, or our respective affiliates assumes any responsibility for the accuracy or the completeness of any information about the underlier or any of the underlier stocks. You, as an investor in the notes, should make your own investigation into the underlier and the underlier stocks. See the section below entitled “The Underlier” for additional information about the underlier.

None of the underlier’s investment advisor, any of the underlier stock issuers or the index sponsor is involved in this offering of the notes in any way, and none of them have any obligation of any sort with respect to the notes. Thus, none of the underlier’s investment advisor, any of the issuers of the underlier stocks, or the index sponsor has any obligation to take your interests into consideration for any reason, including in taking any corporate actions that might

affect the value of the notes.

**You Have Limited Anti-Dilution Protection**

The calculation agent may adjust the final underlier level to reflect certain corporate actions by the underlier, as described in the section “Description of the Notes — Anti-dilution Adjustments for Exchange Traded Funds” in the accompanying product prospectus supplement PB-1. The calculation agent will not be required to make an adjustment for every event that may affect the underlier and will have broad discretion to determine whether and to what extent an adjustment is required.

**You Must Rely on Your Own Evaluation of the Merits of an Investment Linked to the Underlier**

In the ordinary course of business, we, the dealer, our other affiliates and any additional dealers, including in acting as a research provider, investment advisor, market maker, principal investor or distributor, may express research or investment views on expected movements in the underlier, the index or the underlier stocks, and may do so in the future. These views or reports may be communicated to our clients, clients of our affiliates and clients of any additional dealers, and may be

PS-12

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inconsistent with, or adverse to, the objectives of investors in the notes. However, these views are subject to change from time to time. Moreover, other professionals who transact business in markets relating to the underlier, the index or the underlier stocks may at any time have significantly different views from those of these entities. For these reasons, you are encouraged to derive information concerning the underlier, the index or the underlier stocks from multiple sources, and you should not rely solely on views expressed by us, the dealer, our other affiliates, or any additional dealers.

#### We May Sell an Additional Aggregate Amount of the Notes at a Different Original Issue Price

At our sole option, we may decide to sell an additional aggregate amount of the notes subsequent to the trade date. The price of the notes in the subsequent sale may differ substantially (higher or lower) from the principal amount. If the Original Issue Price for Your Notes Represents a Premium to the Principal Amount, the Return on Your Notes Will Be Lower Than the Return on Notes for Which the Original Issue Price Is Equal to the Principal Amount or Represents a Discount to the Principal Amount

The cash settlement amount will not be adjusted based on the original issue price. If the original issue price for your notes differs from the principal amount, the return on your notes held to maturity will differ from, and may be substantially less than, the return on notes for which the original issue price is equal to the principal amount. If the original issue price for your notes represents a premium to the principal amount and you hold them to maturity, the return on your notes will be lower than the return on notes for which the original issue price is equal to the principal amount or represents a discount to the principal amount.

In addition, the impact of the buffer level and the cap level on the return on your investment will depend upon the price you pay for your notes relative to the principal amount. For example, if you purchase your notes at a premium to the principal amount, the cap level will only permit a lower percentage increase in your investment in the notes than would have been the case for notes purchased at the principal amount or a discount to the principal amount. Similarly, the buffer level, while still providing some protection for the return on the notes, will allow a greater percentage decrease in your investment in the notes than would have been the case for notes purchased at the principal amount or a discount to the principal amount.

#### Significant Aspects of the Income Tax Treatment of an Investment in the Notes Are Uncertain

The tax treatment of an investment in the notes 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 notes, and the Internal Revenue Service, the Canada Revenue Agency or a court may not agree with the tax treatment described in this pricing 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 notes even though that holder will not receive any payments with respect to the notes until maturity or earlier sale or exchange and whether all or part of the gain a holder may recognize upon sale, exchange or maturity of an instrument such as the notes could be treated as ordinary income. The outcome of this process is uncertain and could apply on a retroactive basis.

Please read carefully the section entitled “Supplemental Discussion of U.S. Federal Income Tax Consequences” in the accompanying product prospectus supplement PB-1, the section entitled “Certain Income Tax Consequences” in the accompanying prospectus supplement and the section entitled “Tax Consequences” in the accompanying prospectus. You should consult your tax advisor about your own tax situation.

#### Non-U.S. Investors May Be Subject to Certain Additional Risks

The notes will be denominated in U.S. dollars. If you are a non-U.S. investor who purchases the notes with a currency other than U.S. dollars, changes in rates of exchange may have an adverse effect on the value, price or returns of your investment.

This pricing supplement contains a general description of certain U.S. tax considerations relating to the notes. If 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 notes and receiving the payments that might be due under the notes.

For a discussion of certain Canadian federal income tax consequences of investing in the notes, please see the section entitled “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 notes in the secondary market, you should consult your tax advisor as to the consequences of acquiring, holding and disposing of the notes and receiving the payments that might be due under the notes.

**Certain Considerations for Insurance Companies and Employee Benefit Plans**

Any insurance company or fiduciary of a pension plan or other employee benefit plan that is subject to the prohibited transaction rules of the Employee Retirement Income Security Act of 1974, as amended (“ERISA”), or the Internal Revenue Code of 1986, as amended (the “Internal Revenue Code”), including an IRA or a Keogh plan (or a governmental plan to which similar prohibitions apply), and that is considering purchasing the notes with the assets of the insurance company or the assets of such a plan, should consult with its counsel regarding whether the purchase or holding of the notes could become a “prohibited transaction” under ERISA, the Internal Revenue Code or any substantially similar prohibition in light of the representations a purchaser or holder in any of the above categories is deemed to make by purchasing and holding the notes. This is discussed in more detail under “Employee Retirement Income Security Act” in the accompanying product prospectus supplement PB-1.

PS-13

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**THE UNDERLIER****The iShares® MSCI Emerging Markets ETF**

The shares of the underlier are issued by iShares, Inc., a registered investment company. The underlier seeks investment results that correspond generally to the price and yield performance, before fees and expenses, of the index. The underlier trades on the NYSE Arca under the ticker symbol “EEM.” BlackRock Fund Advisors (“BFA”) serves as the investment advisor to the underlier.

BFA, as the investment advisor to the underlier, employs a technique known as representative sampling to track the index. The underlier generally invests at least 90% of its assets in the securities of the index and in American Depositary Receipts or Global Depositary Receipts based on the securities of the index. The underlier may invest the remainder of its assets in securities not included in the index, but which BFA believes will help the underlier track the index, or in futures contracts, options on futures contracts, other types of options and swaps related to the index, as well as cash and cash equivalents, including shares of money market funds affiliated with BFA or its affiliates. BFA will waive portfolio management fees in an amount equal to the portfolio management fees of such other iShares funds for any portion of the underlier’s assets invested in shares of such other funds.

We obtained the following fee information from the underlier’s website, without independent verification. The underlier’s investment advisor is entitled to receive a management fee from the underlier based on the underlier’s allocable portion of the aggregate of the average daily net assets of the underlier as follows: 0.75% per annum of aggregate net assets of the underlier less than or equal to \$14.0 billion, plus 0.68% per annum of the aggregate net assets of the underlier on amounts over \$14.0 billion and up to and including \$28.0 billion, plus 0.61% per annum of the aggregate net assets of the underlier on amounts over \$28.0 billion up to and including \$42.0 billion, plus 0.54% per annum of the aggregate net assets of the underlier on amounts over \$42.0 billion, up to and including \$56.0 billion, plus 0.47% per annum of the aggregate net assets of the underlier on amounts over \$56.0 billion, up to and including \$70.0 billion, plus 0.41% per annum of the aggregate net assets of the underlier on amounts over \$70.0 billion, up to and including \$84.0 billion and 0.35% per annum of the aggregate net assets of the underlier on amounts in excess of \$84.0 billion. As of September 30, 2018 the expense ratio of the underlier was 0.69% per annum. iShares® MSCI Emerging Markets ETF Top Ten Holdings as of January 4, 2019\*

| <u>ETF Stock Issuer</u>                 | <u>Percentage (%)</u> |
|-----------------------------------------|-----------------------|
| TENCENT HOLDINGS LTD                    | 4.70%                 |
| ALIBABA GROUP HOLDING ADR REPRESENTED   | 3.76%                 |
| TAIWAN SEMICONDUCTOR MANUFACTURING      | 3.42%                 |
| SAMSUNG ELECTRONICS LTD                 | 3.30%                 |
| NASPERS LTD                             | 1.86%                 |
| CHINA CONSTRUCTION BANK CORP H          | 1.63%                 |
| CHINA MOBILE LTD                        | 1.25%                 |
| INDUSTRIAL AND COMMERCIAL BANK OF CHINA | 1.01%                 |
| ITAU UNIBANCO HOLDING PREFERRED SA      | 1.00%                 |
| HOUSING DEVELOPMENT FINANCE CORP        | 0.94%                 |
| Total                                   | 22.87%                |

**iShares® MSCI Emerging Markets ETF Weighting by Sector as of January 4, 2019\***

| <u>Sector</u>          | <u>Percentage (%)</u> |
|------------------------|-----------------------|
| Financials             | 24.86%                |
| Communication          | 14.12%                |
| Information Technology | 13.41%                |

|                        |         |
|------------------------|---------|
| Consumer Discretionary | 10.47%  |
| Energy                 | 8.12%   |
| Materials              | 7.56%   |
| Consumer Staples       | 6.76%   |
| Industrials            | 5.49%   |
| Real Estate            | 3.00%   |
| Health Care            | 2.77%   |
| Utilities              | 2.70%   |
| Other                  | 0.74%   |
| Total                  | 100.00% |

\* Percentages may not sum to 100% due to rounding.

The Global Industry Classification Structure, which MSCI utilizes to classify the constituents of the MSCI Emerging Markets Index was updated in September 2018. Please see below for additional information about these updates.

PS-14

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## iShares® MSCI Emerging Markets ETF Weighting by Country as of January 4, 2019

| <u>Country</u>     | <u>Percentage (%)</u> |
|--------------------|-----------------------|
| China              | 30.05%                |
| South Korea        | 13.29%                |
| Taiwan             | 10.72%                |
| India              | 9.17%                 |
| Brazil             | 8.04%                 |
| South Africa       | 6.38%                 |
| Russian Federation | 3.84%                 |
| Mexico             | 2.86%                 |
| Thailand           | 2.48%                 |
| Malaysia           | 2.39%                 |
| Other              | 10.78%                |

For additional information regarding iShares Inc., BFA, the underlier and the risk factors attributable to the underlier, please see the Prospectus, as amended to date, filed as part of the Registration Statement on Form N-1A with the SEC under the Securities Act of 1933, as amended, and under the Investment Company Act of 1940, as amended.

Information provided to or filed with the SEC can be inspected and copied at the public reference facilities maintained by the SEC or through the SEC's website at [www.sec.gov](http://www.sec.gov). In addition, information regarding the underlier, including its top portfolio holdings, may be obtained from other sources including, but not limited to, press releases, newspaper articles, other publicly available documents, and the iShares® website at [www.ishares.com](http://www.ishares.com). We are not incorporating by reference the website or any material it includes in this pricing supplement. Neither we nor the dealer makes any representation or warranty as to the accuracy or completeness of any such material.

#### Investment Objective and Strategy

The underlier seeks to provide investment results that correspond generally to the price and yield performance, before fees and expenses, of publicly traded securities in emerging markets, as represented by the index. The underlier's investment objective and the index may be changed at any time without shareholder approval. Notwithstanding the underlier's investment objective, the return on your notes will not reflect any dividends paid on the underlier shares, on the securities purchased by the underlier or on the securities that comprise the underlying index.

The return on your notes is linked to the performance of the iShares® MSCI Emerging Markets ETF, and not to the performance of the MSCI Emerging Markets Index on which the underlier is based. Although the underlier seeks results that correspond generally to the performance of the index, the underlier follows a strategy of "representative sampling," which means the underlier's holdings do not identically correspond to the holdings and weightings of the index, and may significantly diverge from the index. Although the underlier generally invests at least 90% of its assets in some of the same securities as those contained in the index and in depositary receipts representing the same securities as those contained in the index, it does not hold all of the securities underlying the index and may invest the remainder in securities that are not contained in the index, or in other types of investments. Currently, the underlier holds substantially fewer securities than the index. Additionally, when the underlier purchases securities not held by the index, the underlier may be exposed to additional risks, such as counterparty credit risk or liquidity risk, to which the index components are not exposed. Therefore, the underlier will not directly track the performance of the underlying index and there may be significant variation between the performance of the underlier and the index on which it is based.

#### Representative Sampling

BFA uses a representative sampling strategy to track the index. Representative sampling is an indexing strategy that involves investing in a representative sample of securities that collectively has an investment profile similar to the underlying index. The securities selected are expected to have, in the aggregate, investment characteristics (based on factors such as market capitalization and industry weightings), fundamental characteristics (such as return variability

and yield) and liquidity measures similar to those of the underlying index. Funds may or may not hold all of the securities that are included in the underlying index.

#### Correlation

The index is a theoretical financial calculation, while the underlier is an actual investment portfolio. The performance of the underlier and the index will vary somewhat due to transaction costs, foreign currency valuations, asset valuations, corporate actions (such as mergers and spin-offs), timing variances and differences between the underlier's portfolio and the index resulting from legal restrictions (such as diversification requirements that apply to the underlier but not to the index) or representative sampling. A figure of 100% would indicate perfect correlation. Any correlation of less than 100% is called "tracking error." The underlier, using representative sampling, can be expected to have a greater tracking error than an underlier using a replication indexing strategy. "Replication" is a strategy in which a fund invests in substantially all of the securities in its underlying index in approximately the same proportions as in the underlying index. Additional information can be found on the iShares® website provided above, which compares performance information for the market value return of the underlier's shares and the index return for various periods.

PS-15

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#### Industry Concentration Policy

The underlier will not concentrate its investments (i.e., hold 25% or more of its total assets in the stocks of a particular industry or group of industries), except that, to the extent practicable, the underlier will concentrate its investments to approximately the same extent that the index concentrates in the stocks of such particular industry or group of industries.

#### Creation Units

The underlier issues and redeems shares at its net asset value per share only in blocks of 450,000 shares or multiples thereof ("Creation Units"). As a practical matter, only institutions or large investors purchase or redeem Creation Units. These transactions are usually effected in exchange for a basket of securities similar to the underlier's portfolio and an amount of cash. Except when aggregated in Creation Units, shares of the underlier are not redeemable securities. Redemptions of Creation Units may cause temporary dislocations in tracking errors.

#### Share Prices

The approximate value of one share of the underlier is disseminated every fifteen seconds throughout the trading day by the national securities exchange on which the underlier is listed or by other information providers or market data vendors. This approximate value should not be viewed as a "real-time" update of the net asset value, because the approximate value may not be calculated in the same manner as the net asset value, which is computed once a day. The approximate value generally is determined by using current market quotations and/or price quotations obtained from broker-dealers that may trade in the underlier stocks held by the underlier. The underlier is not involved in, or responsible for, the calculation or dissemination of the approximate value and makes no warranty as to its accuracy.

#### The MSCI Emerging Markets Index

The information below is included only to give insight to the index, the performance of which the underlier attempts to reflect. The notes are linked to the performance of the underlier and not to the index.

The index is a stock index calculated, published and disseminated daily by MSCI through numerous data vendors, on the MSCI website and in real time on Bloomberg Financial Markets and Reuters Limited. Additional information about the MSCI Indices is available on the following website: [msci.com](http://msci.com). We are not incorporating by reference the website or any material it includes in this pricing supplement. Neither we nor the dealer makes any representation or warranty as to the accuracy or completeness of any such material.

The index is intended to measure equity market performance in the global emerging markets. The index is a free float-adjusted market capitalization index with a base date of December 31, 1987 and an initial value of 100. The index is calculated daily in U.S. dollars and published in real time every 60 seconds during market trading hours. The index currently consists of the following 24 emerging market country indices: Brazil, Chile, China, Colombia, Czech Republic, Greece, Egypt, Hungary, India, Indonesia, South Korea, Malaysia, Mexico, Pakistan, Peru, Philippines, Poland, Qatar, Russia, South Africa, Taiwan, Thailand, Turkey and United Arab Emirates.

As of the close on May 31, 2018, MSCI began a multi-step process to include, in the MSCI Emerging Markets Index, large cap China A shares that are not in trading suspension. As part of the first step of the inclusion process, which resulted from the May 2018 quarterly index review, MSCI added such large cap China A shares to the MSCI Emerging Markets Index at 2.5% of their foreign inclusion factor-adjusted market capitalization. In connection with the August 2018 quarterly index review, MSCI implemented the second step of the inclusion process by increasing the foreign inclusion factor-adjusted market capitalization of those existing China A share constituents from 2.5% to 5%. With the implementation of this second step, and the inclusion of additional China A shares in connection with the August 2018 quarterly index review, China A shares were initially expected to represent approximately 0.75% of the MSCI Emerging Markets Index.

MSCI has announced that, beginning in June 2019, it expects to include the MSCI Saudi Arabia Index in the MSCI Emerging Markets Index, representing on a pro forma basis a weight of approximately 2.6% of the MSCI Emerging Markets Index with 32 securities, following a two-step inclusion process. The first inclusion step is expected to coincide with the May 2019 semi-annual review and the second inclusion step is expected to take place as part of the August 2019 quarterly index review. In addition, MSCI has announced the reclassification of the MSCI Argentina Index from a "frontier market" to an "emerging market", and the MSCI Argentina Index is expected to be included in the MSCI Emerging Markets Index coinciding with the May 2019 semi-annual index review. MSCI expects to continue to restrict the inclusion in the MSCI Argentina Index to only foreign listings of Argentinian companies, such as American depositary receipts.

The index is part of the MSCI Regional Equity Indices series and is an MSCI Global Investable Market Index, which is a family within the MSCI International Equity Indices.

Constructing the MSCI Global Investable Market Indices. MSCI undertakes an index construction process, which involves:

§ defining the equity universe;

§ determining the market investable equity universe for each market;

§ determining market capitalization size segments for each market;

§ applying index continuity rules for the MSCI Standard Index;

§ creating style segments within each size segment within each market; and

§ classifying securities under the Global Industry Classification Standard (the “GICS”).

Defining the Equity Universe. The equity universe is defined by:

Identifying Eligible Equity Securities: the equity universe initially looks at securities listed in any of the countries in the MSCI Global Index Series, which will be classified as either Developed Markets (“DM”) or Emerging Markets (“EM”). All listed equity securities, including Real Estate Investment Trusts and certain income trusts in Canada, are § eligible for inclusion in the equity universe. Conversely, mutual funds, ETFs, equity derivatives, and most investment trusts, are not eligible for inclusion, are eligible for inclusion in the equity universe. Conversely, mutual funds, ETFs, equity derivatives, and most investment trusts, are not.

§ Classifying Eligible Securities into the Appropriate Country: each company and its securities (i.e., share classes) are classified in only one country.

Effective with the November 2015 semi-annual index review, companies traded outside of their country of classification (i.e., “foreign listed companies”) will become eligible for inclusion in the MSCI Country Investable Market Indexes along with the applicable MSCI Global Index. In order for a MSCI Country Investable Market Index to be eligible to include foreign listed companies, it must meet the Foreign Listing Materiality Requirement. To meet the Foreign Listing Materiality Requirement, the aggregate market capitalization of all securities represented by foreign listings should represent at least (i) 5% of the free float-adjusted market capitalization of the relevant MSCI Country Investable Market Index and (ii) 0.05% of the free-float adjusted market capitalization of the MSCI ACWI Investable Market Index.

**Determining the Market Investable Equity Universes.** A market investable equity universe for a market is derived by identifying eligible listings for each security in the equity universe, and by applying applying investability screens to individual companies and securities in the equity universe that are classified in that market. A market is equivalent to a single country, except in DM Europe, where all DM countries in Europe are aggregated into a single market for index construction purposes. Subsequently, individual DM Europe country indices within the MSCI Europe Index are derived from the constituents of the MSCI Europe Index under the global investable market indices methodology. A security may be listed in the country where it is classified (i.e. local listing) and/or in a different country (i.e. “foreign listing”). Securities may be represented by either a local or foreign listing. A security may be represented by a foreign listing only if:

§ The security is classified in a country that meets the Foreign Listing Materiality Requirement, and  
 The security’s foreign listing is traded on an eligible stock exchange of: a DM country if the security is classified in a DM country, a DM or an EM country if the security is classified in an EM country, or a DM or an EM or a FM  
 § country if the security is classified in a FM country. Securities in that country may not be represented by a foreign listing in the global investable equity universe if a country does not meet the requirement.

The investability screens used to determine the investable equity universe in each market are as follows:

**Equity Universe Minimum Size Requirement:** this investability screen is applied at the company level. In order to be  
 § included in a market investable equity universe, a company must have the required minimum full market capitalization. The size requirement also applies to companies in all developed and emerging markets.

**Equity Universe Minimum Free Float-Adjusted Market Capitalization Requirement:** this investability screen is  
 § applied at the individual security level. To be eligible for inclusion in a market investable equity universe, a security must have a free float-adjusted market capitalization equal to or higher than 50% of the equity universe minimum size requirement.

**DM and EM Minimum Liquidity Requirement:** this investability screen is applied at the individual security level. To be eligible for inclusion in a market investable equity universe, a security must have adequate liquidity. The twelve-month and three-month Annual Traded Value Ratio (“ATVR”), a measure that screens out extreme daily trading volumes and takes into account the free float-adjusted market capitalization size of securities, together with  
 § the three-month frequency of trading are used to measure liquidity. A minimum liquidity level of 20% of three- and twelve-month ATVR and 90% of three-month frequency of trading over the last four consecutive quarters are required for inclusion of a security in a market investable equity universe of a DM, and a minimum liquidity level of 15% of three- and twelve-month ATVR and 80% of three-month frequency of trading over the last four consecutive quarters are required for inclusion of a security in a market investable equity universe of an EM.

**Global Minimum Foreign Inclusion Factor Requirement:** this investability screen is applied at the individual security level. To be eligible for inclusion in a market investable equity universe, a security’s Foreign Inclusion Factor (“FIF”) must reach a certain threshold. The FIF of a security is defined as the proportion of shares outstanding that is  
 § available for purchase in the public equity markets by international investors. This proportion accounts for the available free float of and/or the foreign ownership limits applicable to a specific security (or company). In general, a security must have an FIF equal to or larger than 0.15 to be eligible for inclusion in a market investable equity universe.

**§ Minimum Length of Trading Requirement:** this investability screen is applied at the individual security level. For an initial public offering (“IPO”) to be eligible for inclusion in a market investable equity universe, the new issue must have started trading at least three months before the implementation of a semi-annual index review (as described below). This requirement is applicable to small new issues in all markets. Large IPOs are not subject to the minimum length of trading requirement and may be included in a market investable equity universe and the Standard Index

outside of a Quarterly or Semi-Annual Index Review.

Minimum Foreign Room Requirement: this investability screen is applied at the individual security level. For a security that is subject to a foreign ownership limit to be eligible for inclusion in a market investable equity universe, § the proportion of shares still available to foreign investors relative to the maximum allowed (referred to as “foreign room”) must be at least 15%.

Defining Market Capitalization Size Segments for Each Market. Once a market investable equity universe is defined, it is segmented into the following size-based indices:

§ Investable Market Index (Large + Mid + Small);

§ Standard Index (Large + Mid);

§ Large Cap Index;

§ Mid Cap Index; or

§ Small Cap Index.

Creating the size segment indices in each market involves the following steps:

§ defining the market coverage target range for each size segment;

§ determining the global minimum size range for each size segment;

§ determining the market size-segment cutoffs and associated segment number of companies;

§ assigning companies to the size segments; and

§ applying final size-segment investability requirements.

PS-17

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Index Continuity Rules for the Standard Indices. In order to achieve index continuity, as well as to provide some basic level of diversification within a market index, and notwithstanding the effect of other index construction rules described in this section, a minimum number of five constituents will be maintained for a DM Standard Index and a minimum number of three constituents will be maintained for an EM Standard Index.

Creating Style Indices within Each Size Segment. All securities in the investable equity universe are classified into value or growth segments using the MSCI Global Value and Growth methodology. Classifying Securities under the Global Industry Classification Standard. All securities in the global investable equity universe are assigned to the industry that best describes their business activities. To this end, MSCI has designed, in conjunction with S&P Dow Jones Indexes, the GICS. Under the GICS, each company is assigned to one sub-industry according to its principal business activity. Therefore, a company can belong to only one industry grouping at each of the four levels of the GICS.

MSCI divides the companies included in the MSCI Emerging Markets Index into eleven Global Industry Classification Sectors: Financials, Consumer Discretionary, Industrials, Information Technology, Consumer Staples, Materials, Real Estate, Health Care, Telecommunication Services, Utilities and Energy. As of the close of business on September 21, 2018, MSCI and S&P Dow Jones Indices LLC updated the Global Industry Classification Sector structure. Among other things, the update broadened the Telecommunications Services sector and renamed it the Communication Services sector. The renamed sector includes the previously existing Telecommunication Services Industry group, as well as the Media Industry group, which was moved from the Consumer Discretionary sector and renamed the Media & Entertainment Industry group. The Media & Entertainment Industry group contains three industries: Media, Entertainment and Interactive Media & Services. The Media industry continues to consist of the Advertising, Broadcasting, Cable & Satellite and Publishing sub-industries. The Entertainment industry contains the Movies & Entertainment sub-industry (which includes online entertainment streaming companies in addition to companies previously classified in such industry prior to September 21, 2018) and the Interactive Home Entertainment sub-industry (which includes companies previously classified in the Home Entertainment Software sub-industry prior to September 21, 2018 (when the Home Entertainment Software sub-industry was a sub-industry in the Information Technology sector)), as well as producers of interactive gaming products, including mobile gaming applications). The Interactive Media & Services industry and sub-industry includes companies engaged in content and information creation or distribution through proprietary platforms, where revenues are derived primarily through pay-per-click advertisements, and includes search engines, social media and networking platforms, online classifieds and online review companies. The Global Industry Classification Sector structure changes are effective for the MSCI Emerging Markets Index as of the open of business on December 3, 2018 to coincide with the November 2018 semi-annual index review.

#### Calculation Methodology for the Underlying Index

The performance of the underlying index is a free float weighted average of the U.S. dollar values of its component securities.

Prices used to calculate the component securities are the official exchange closing prices or prices accepted as such in the relevant market. In the case of a market closure, or if a security does not trade on a specific day or during a specific period, MSCI carries forward the previous day's price (or latest available closing price). In the event of a market outage resulting in any component security price to be unavailable, MSCI will generally use the last reported price for such component security for the purpose of performance calculation unless MSCI determines that another price is more appropriate based on the circumstances. Closing prices are converted into U.S. dollars, as applicable, using the closing exchange rates calculated by WM/Reuters at 4:00 P.M. London Time.

#### Index Maintenance

The MSCI global investable market indices are maintained with the objective of reflecting the evolution of the underlying equity markets and segments on a timely basis, while seeking to achieve index continuity, continuous investability of constituents and replicability of the indices, index stability, and low index turnover. In particular, index maintenance involves:

(i) Semi-Annual Index Reviews ("SAIRs") in May and November of the Size Segment and Global Value and Growth Indices which include:

§ updating the indices on the basis of a fully refreshed equity universe;

§ taking buffer rules into consideration for migration of securities across size and style segments; and

§ updating FIFs and Number of Shares (“NOS”).

(ii) Quarterly Index Reviews (“QIRs”) in February and August of the Size Segment Indices aimed at:

§ including significant new eligible securities (such as IPOs that were not eligible for earlier inclusion) in the index;

§ allowing for significant moves of companies within the Size Segment Indices, using wider buffers than in the SAIR;  
§ and

§ reflecting the impact of significant market events on FIFs and updating NOS.

(iii) Ongoing Event-Related Changes: changes of this type are generally implemented in the indices as they occur.

Significantly large IPOs are included in the indices after the close of the company’s tenth day of trading.

None of us, the dealer or any of our affiliates accepts any responsibility for the calculation, maintenance, or publication of, or for any error, omission, or disruption in, the underlier any successor to the underlier.

PS-18

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#### Historical Performance of the Underlier

The price of the underlier has fluctuated in the past and may experience significant fluctuations in the future. Any historical upward or downward trend in the price of the underlier during any period shown below is not an indication that the underlier is more or less likely to increase or decrease at any time during the term of the notes.

The historical levels of the underlier are provided for informational purposes only. You should not take the historical levels of the underlier as an indication of its future performance. We cannot give you any assurance that the future performance of the underlier or the underlier stocks will result in your receiving an amount greater than the original issue price at maturity. Neither we nor any of our affiliates makes any representation to you as to the performance of the underlier. Moreover, in light of current market conditions, the trends reflected in the historical performance of the underlier may be less likely to be indicative of the performance of the underlier over the term of the notes than would otherwise have been the case. The actual performance of the underlier over the term of the notes, as well as the cash settlement amount, may bear little relation to the historical levels shown below.

The graph below shows the daily historical closing prices of the underlier from January 4, 2009 through January 4, 2019. We obtained the closing prices of the underlier listed in the graph below from Bloomberg Financial Services, without independent verification.

Historical Performance of the iShares® MSCI Emerging Markets ETF

PS-19

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

The following disclosure supplements, and to the extent inconsistent supersedes, the discussion in the product prospectus supplement dated September 20, 2018 under “Supplemental Discussion of U.S. Federal Income Tax Consequences.”

Under Section 871(m) of the Code, a “dividend equivalent” payment is treated as a dividend from sources within the United States. 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, 2021. Based on our determination that the notes are not delta-one instruments, non-U.S. holders should not be subject to withholding on dividend equivalent payments, if any, under the notes. However, it is possible that the notes could be treated as deemed reissued for U.S. federal income tax purposes upon the occurrence of certain events affecting the underlier or the notes, and following such occurrence the notes 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 underlier or the notes should consult their tax advisors as to the application of the dividend equivalent withholding tax in the context of the notes and their other transactions. If any payments are treated as dividend equivalents subject to withholding, we (or the applicable withholding agent) would be entitled to withhold taxes without being required to pay any additional amounts with respect to amounts so withheld.

The accompanying product prospectus supplement notes that FATCA withholding on payments of gross proceeds from a sale or redemption of notes will only apply to payments made after December 31, 2018. That discussion is modified to reflect regulations proposed by the U.S. Treasury Department in December 2018 indicating an intent to eliminate the requirement under FATCA of withholding on gross proceeds of the disposition of financial instruments. The U.S. Treasury Department has indicated that taxpayers may rely on these proposed regulations pending their finalization. Prospective investors are urged to consult with their own tax advisors regarding the possible implications of FATCA on their investment in the notes.

## SUPPLEMENTAL PLAN OF DISTRIBUTION (CONFLICTS OF INTEREST)

We will agree to sell to RBCCM, and RBCCM will agree to purchase from us, the principal amount of the notes specified, at the price specified, on the cover page of this pricing supplement. RBCCM has informed us that, as part of its distribution of the notes, it will reoffer them at a purchase price equal to [100.00]% of the principal amount to one or more other dealers who will sell them to their customers. In the future, RBCCM or one of its affiliates, may repurchase and resell the notes in market-making transactions, with resales being made at prices related to prevailing market prices at the time of resale or at negotiated prices. For more information about the plan of distribution, the distribution agreement and possible market-making activities, see “Supplemental Plan of Distribution” in the accompanying prospectus supplement. For additional information as to the relationship between us and RBCCM, please see the section “Plan of Distribution Conflicts of Interest” in the accompanying prospectus.

If the notes priced on the date of this pricing supplement, RBCCM, acting as agent for Royal Bank of Canada, would not receive an underwriting discount in connection with the sale of the notes.

We expect to deliver the notes against payment therefor in New York, New York on \_\_\_\_\_, 2019, which is expected to be the fifth scheduled business day following the trade date. Under Rule 15c6-1 of the Securities Exchange Act of 1934, trades in the secondary market generally are required to settle in two business days, unless the parties to any such trade expressly agree otherwise. Accordingly, purchasers who wish to trade notes on any date prior to two business days before delivery will be required, by virtue of the fact that the notes are initially expected to settle in five business days (T + 5), to specify alternative settlement arrangements to prevent a failed settlement.

RBCCM may use this pricing supplement in the initial sale of the notes. In addition, RBCCM or any other affiliate of Royal Bank of Canada may use this pricing supplement in a market-making transaction in a note after its initial sale. Unless RBCCM or its agent informs the purchaser otherwise in the confirmation of sale, this pricing supplement is being used in a market-making transaction.

RBCCM or another of our affiliates may make a market in the notes after the trade date; however, it is not obligated to do so. The price that it makes available from time to time after the issue date at which it would be willing to repurchase the notes will generally reflect its estimate of their value. That estimated value will be based upon a variety of factors, including then prevailing market conditions, our creditworthiness and transaction costs. However, for a period of approximately three months after the trade date, the price at which RBCCM may repurchase the notes is expected to be higher than their estimated value at that time. This is because, at the beginning of this period, that price will not include certain costs that were included in the original issue price, particularly our hedging costs and profits. As the period continues, these costs are expected to be gradually included in the price that RBCCM would be willing to pay, and the difference between that price and RBCCM's estimate of the value of the notes will decrease over time until the end of this period. After this period, if RBCCM continues to make a market in the notes, the prices that it would pay for them are expected to reflect its estimated value, as well as customary bid-ask spreads for similar trades. In addition, the value of the notes shown on your account statement may not be identical to the price at which RBCCM would be willing to purchase the notes at that time, and could be lower than RBCCM's price.

PS-20

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## STRUCTURING THE NOTES

The notes are our debt securities. As is the case for all of our debt securities, including our structured notes, the economic terms of the notes reflect our actual or perceived creditworthiness. In addition, because structured notes result in increased operational, funding and liability management costs to us, we typically borrow the funds under these notes at a rate that is lower than the rate that we might pay for a conventional fixed or floating rate debt security of comparable maturity. This relatively lower implied borrowing rate, which is reflected in the economic terms of the notes, along with the fees and expenses associated with structured notes, typically reduces the initial estimated value of the notes at the time their terms are set.

In order to satisfy our payment obligations under the notes, we may choose to enter into certain hedging arrangements (which may include call options, put options or other derivatives) with RBCCM and/or one of our other subsidiaries. The terms of these hedging arrangements take into account a number of factors, including our creditworthiness, interest rate movements, and the tenor of the notes. The economic terms of the notes and their initial estimated value depend in part on the terms of these hedging arrangements. Our cost of hedging will include the projected profit that such counterparties expect to realize in consideration for assuming the risks inherent in hedging our obligations under the notes. Because hedging our obligations entails risks and may be influenced by market forces beyond the counterparties' control, such hedging may result in a profit that is more or less than expected, or could result in a loss. See "Use of Proceeds and Hedging" on page PS-13 of the accompanying product prospectus supplement PB-1. The lower implied borrowing rate and the hedging-related costs relating to the notes reduce the economic terms of the notes to you and result in the initial estimated value for the notes on the trade date being less than their original issue price. See "Risk Factors—Our Initial Estimated Value of the Notes Will Be Less than the Original Issue Price."

PS-21

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## TABLE OF CONTENTS

### Pricing Supplement

|                                                                 |       |
|-----------------------------------------------------------------|-------|
| Summary Information                                             | PS-2  |
| Hypothetical Examples                                           | PS-4  |
| Additional Risk Factors Specific to Your Notes                  | PS-7  |
| The Underlier                                                   | PS-14 |
| Supplemental Discussion of U.S. Federal Income Tax Consequences | PS-20 |
| Supplemental Plan of Distribution (Conflicts of Interest)       | PS-20 |
| Structuring the Notes                                           | PS-21 |

### Product Prospectus Supplement PB-1 dated September 20, 2018

|                                                                 |       |
|-----------------------------------------------------------------|-------|
| Summary                                                         | PS-1  |
| Risk Factors                                                    | PS-3  |
| General Terms of the Notes                                      | PS-4  |
| Hypothetical Returns on Your Notes                              | PS-12 |
| Use of Proceeds and Hedging                                     | PS-13 |
| Historical Underlier Information                                | PS-14 |
| Supplemental Discussion of Canadian Tax Consequences            | PS-15 |
| Supplemental Discussion of U.S. Federal Income Tax Consequences | PS-16 |
| Employee Retirement Income Security Act                         | PS-20 |
| Supplemental Plan of Distribution                               | PS-21 |

### Prospectus Supplement dated September 7, 2018

|                                                       |      |
|-------------------------------------------------------|------|
| About This Prospectus Supplement                      | i    |
| Risk Factors                                          | S-1  |
| Use of Proceeds                                       | S-9  |
| Description of Notes We May Offer                     | S-9  |
| Certain Income Tax Consequences                       | S-29 |
| Supplemental Plan of Distribution                     | S-32 |
| Documents Filed as Part of the Registration Statement | S-34 |

### Prospectus dated September 7, 2018

|                                                  |     |
|--------------------------------------------------|-----|
| Documents Incorporated by Reference              | i   |
| Where You Can Find More Information              | ii  |
| Further Information                              | ii  |
| About This Prospectus                            | iii |
| Risk Factors                                     | 1   |
| Royal Bank of Canada                             | 1   |
| Presentation of Financial Information            | 1   |
| Caution Regarding Forward-Looking Statements     | 1   |
| Use of Proceeds                                  | 2   |
| Consolidated Ratios of Earnings to Fixed Charges | 3   |
| Consolidated Capitalization and Indebtedness     | 3   |
| Comparative per Share Market Price               | 4   |
| Description of Debt Securities                   | 4   |
| Description of Common Shares                     | 28  |

|                                                                                     |    |
|-------------------------------------------------------------------------------------|----|
| Description of Warrants                                                             | 30 |
| Tax Consequences                                                                    | 37 |
| Plan of Distribution                                                                | 50 |
| Conflicts of Interest                                                               | 52 |
| Benefit Plan Investor Considerations                                                | 53 |
| Limitations on Enforcement of U.S. Laws Against the Bank, Our Management and Others | 54 |
| Validity of Securities                                                              | 54 |
| Experts                                                                             | 54 |
| Other Expenses of Issuance and Distribution                                         | 55 |

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