

ROYAL BANK OF CANADA  
 Form FWP  
 March 19, 2019

March 2019  
 MSELN-378  
 Registration Statement No. 333-227001  
 Dated March 19, 2019  
 Filed Pursuant to Rule 433

**STRUCTURED INVESTMENTS**

Opportunities in U.S. and International Equities

Contingent Income Auto-Callable Securities due March 25, 2021

Based on the Worst Performing of the SPDR® S&P 500® ETF Trust, the iShares® Russell 2000 ETF and the iShares® MSCI Brazil ETF

Principal at Risk Securities

The Contingent Income Auto-Callable Securities do not guarantee the payment of interest or the repayment of principal. Instead, the securities offer the opportunity for investors to earn a contingent quarterly payment equal to 2.5625% of the principal amount (10.25% per annum), if the determination closing price of each underlying share on the applicable quarterly determination date is greater than or equal to 60% of the initial share price (the “coupon threshold price”). In addition, on the first 7 contingent payment dates, the securities will be automatically called for an amount per security equal to the principal amount plus the contingent quarterly payment if the determination closing price of each underlying share is greater than or equal to its initial share price. However, if the securities are not automatically called, the payment at maturity will be the principal amount only if the final share price of each underlying share is greater than or equal to 60% of its initial share price (the “downside threshold price”). Investors will be exposed to the decline in the closing price of the worst performing underlying share, as compared to its initial share price, on a 1 to 1 basis if the final share price of any underlying share is below its downside threshold price. Under these circumstances, the payment at maturity will be less than 60% of the principal amount, and could be zero. Moreover, if the determination closing price of any underlying share on a determination date is less than its coupon threshold price, you will not receive any contingent quarterly payment on the applicable contingent payment date. As a result, investors must be willing to accept the risk of not receiving any contingent quarterly payments and also the risk of receiving payment at maturity that is significantly less than the principal amount of the securities and could be zero. Investors could lose their entire initial investment in the securities. Investors will not participate in any appreciation of any underlying share. The securities are our senior unsecured obligations, issued as part of our Series H Senior Global Medium-Term Notes program. All payments on the securities are subject to our credit risk.

**SUMMARY TERMS**

|                             |   |
|-----------------------------|---|
| Issuer:                     | Royal Bank of Canada  |
| Underlying shares:          | Shares of the SPDR® S&P 500® ETF Trust (Bloomberg symbol: SPY), the iShares® Russell 2000 ETF (Bloomberg symbol: IWM) and the iShares® MSCI Brazil ETF (Bloomberg symbol: EWZ)(each, an “underlying” and together the “underlyings”)                    |
| Aggregate principal amount: | \$  |
| Stated principal amount:    | \$10 per security   |
| Pricing date:               | March 22, 2019  |
| Original issue date:        | March 27, 2019 (3 business days after the pricing date)   |
| Maturity date:              | March 25, 2021, subject to adjustment as described below.   |
| Automatic early redemption: | On the first 7 contingent payment dates, the securities will be automatically called if, on the immediately preceding determination date, the determination closing price of each underlying share is equal to or greater than its initial share price. |

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|  |   |   |  |
|--|---|---|--|
| Early redemption payment:                            | The early redemption payment will be payable on the applicable contingent payment date, and will be an amount equal to (i) the principal amount plus (ii) the contingent quarterly payment with respect to the related contingent payment date.<br>If the determination closing price (or final share price, as applicable) of each underlying on the preceding determination date is greater than or equal to its coupon threshold price, we will pay a contingent quarterly payment of \$0.25625 (2.5625% of the principal amount) per security on the related contingent payment date.       |   |  |
| Contingent quarterly payment:                        | If the determination closing price (or final share price, as applicable) of any underlying on a determination date is less than its coupon threshold price, no contingent quarterly payment will be made with respect to that contingent payment date.<br>It is possible that one or more underlyings will close below their respective coupon threshold prices on at least one determination date, so that you will receive few or no contingent quarterly payments during the term of the securities.<br>June 24, 2019, September 23, 2019, December 23, 2019, March 23, 2020, June 22, 2020, |   |  |
| Determination dates:                                 | September 22, 2020, December 22, 2020 and March 22, 2021 (the “final valuation date”), subject to postponement as described below.  |   |  |
| Contingent payment dates:                            | June 27, 2019, September 26, 2019, December 27, 2019, March 26, 2020, June 25, 2020, September 25, 2020, December 28, 2020 and the maturity date, subject to postponement as described below.   |   |  |
| Payment at maturity:                                 | price:  | If the final share price of each underlying is greater than or equal to its downside threshold price: | (i) the principal amount plus (ii) the contingent quarterly payment with respect to the maturity date<br>the stated principal amount x share performance factor of the worst performing underlying |
| Coupon threshold price and downside threshold price: | As to each underlying, 60% of its initial share price   |   |  |
| Initial share price:                                 | As to each underlying, its closing price on the pricing date  |   |  |
| Final share price:                                   | As to each underlying, its closing price on the final valuation date, multiplied by its Adjustment Factor (as defined below) on that day.   |   |  |
| Determination closing price:                         | With respect to each underlying share, its official closing price on any determination date other than the final determination date multiplied by its Adjustment Factor on that day, as determined by the calculation agent.  |   |  |
| Share performance factor:                            | As to each underlying share, a fraction, determined as follows: final share price/initial share price   |   |  |
| Worst performing underlying:                         | The underlying share with the lowest share performance factor.  |   |  |
| CUSIP/ISIN:  | 78014H417 / US78014H4175  |   |  |
| Listing:   | The securities will not be listed on any securities exchange.   |   |  |
| Agent:   | RBC Capital Markets, LLC (“RBCCM”). See “Supplemental information regarding plan of distribution; conflicts of interest.”   |   |  |
| Commissions and issue price:                         | Price to public Agent’s commissions Proceeds to issuer  |   |  |
| Per security   | \$10  | \$0.15 <sup>(1)</sup>   | \$9.80   |
| Total  | \$  | \$  | \$   |

<sup>(1)</sup> RBCCM, acting as agent for Royal Bank of Canada, will receive a fee of \$0.20 per \$10 stated principal amount and will pay to Morgan Stanley Wealth Management (“MSWM”) a fixed sales commission of \$0.15 for each security that MSWM sells. See “Supplemental information regarding plan of distribution; conflicts of interest.”

<sup>(2)</sup> Of the amount per \$10 stated principal amount received by RBCCM, acting as agent for Royal Bank of Canada, RBCCM will pay MSWM a structuring fee of \$0.05 for each security.

The pricing date, original issue date and other dates set forth above are subject to change, and will be set forth in the pricing supplement relating to the securities. The initial estimated value of the securities as of the pricing date is expected to be between \$9.4309 and \$9.7309, and will be less than the price to public. The pricing supplement relating to the securities will set forth our estimate of the initial value of the securities as of the pricing date. The actual value of the securities at any time will reflect many factors, cannot be predicted with accuracy, and may be less than this amount.

The securities involve risks not associated with an investment in ordinary debt securities. See “Risk Factors” beginning on page 6.

The Securities and Exchange Commission and state securities regulators have not approved or disapproved these securities, or determined if this document or the accompanying prospectus supplement and prospectus is truthful or complete. Any representation to the contrary is a criminal offense.

The securities will not constitute deposits insured by the Canada Deposit Insurance Corporation, the U.S. Federal Deposit Insurance Corporation or any other Canadian or U.S. government agency or instrumentality. The securities are not subject to conversion into our common shares under subsection 39.2(2.3) of the Canada Deposit Insurance Corporation Act.

You should read this document together with the related prospectus supplement and prospectus, each of which can be accessed via the hyperlinks below.

Please also see “Additional Information About the Securities” at the end of this document.

[Prospectus Supplement dated September 7, 2018](#)

[Prospectus dated September 7, 2018](#)

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Contingent Income Auto-Callable Securities due March 25, 2021

Based on the Worst Performing of the SPDR® S&P 500® ETF Trust, the iShares® Russell 2000 ETF and the iShares® MSCI Brazil ETF

Key Investment Rationale

The securities offer investors an opportunity to earn a contingent quarterly payment equal to 2.5625% of the principal amount with respect to each determination date on which the determination closing price or the final share price, as applicable, of each underlying is greater than or equal to 60% of its initial share price. The securities may be automatically redeemed prior to maturity for the principal amount per security plus the applicable contingent quarterly payment, and the payment at maturity will vary depending on the final share price of each underlying as follows:

- Scenario 1      On any of the first 7 determination dates, the determination closing price of each underlying is greater than or equal to its initial share price.  
§      The securities will be automatically redeemed for (i) the stated principal amount plus (ii) the contingent quarterly payment with respect to the related determination date.  
§      Investors will not participate in the appreciation of any underlying from its initial share price.
- Scenario 2      The securities are not automatically redeemed prior to maturity and the final share price of each underlying is greater than or equal to its downside threshold price.  
§      The payment due at maturity will be (i) the stated principal amount plus (ii) the contingent quarterly payment with respect to the final determination date.  
§      Investors will not participate in the appreciation of any underlying from its initial share price.
- Scenario 3      The securities are not automatically redeemed prior to maturity and the final share price of at least one underlying is less than its downside threshold price.  
§      The payment due at maturity will be the stated principal amount x the share performance factor of the worst performing underlying.  
§      Investors will lose a significant portion of, and may lose all, of their principal amount in this scenario.

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How the Securities Work

The following diagrams illustrate the potential outcomes for the securities depending on (1) the determination closing price of each underlying on each determination date and (2) the final share price of each underlying, as applicable.

Diagram #1: First 7 Determination Dates

Diagram #2: Payment at Maturity if No Automatic Early Redemption Occurs

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Hypothetical Examples

The examples below are based on the following terms:

|   |  |
|---|--|
| Hypothetical initial share prices:                                  | \$100 with respect to each underlying              |
| Hypothetical Coupon Threshold Prices and Downside Threshold Prices: | \$60 with respect to each underlying               |
| Contingent Quarterly Payment:                                       | \$0.25625 (2.5625% of the stated principal amount) |
| Stated Principal Amount:  | \$10 per security                                  |

In Examples 1 and 2, the determination closing prices of the underlyings fluctuate over the term of the securities and the determination closing price of each underlying is greater than or equal to its initial share price on one of the first 7 determination dates. As a result, the securities are automatically redeemed following the relevant determination date. In Examples 3 and 4, the determination closing price of one or more underlyings on the first 7 determination dates is less than its initial share price, and, consequently, the securities are not automatically redeemed prior to, and remain outstanding until, maturity.

| Determination Dates                    | Example 1<br>Hypothetical<br>Determination<br>Closing Prices (or<br>Final<br>Share Prices) |        |        | Contingent<br>Quarterly<br>Payment | Early<br>Redemption<br>Payment* | Example 2<br>Hypothetical<br>Determination<br>Closing Prices (or<br>Final<br>Share Prices) |        |        | Contingent<br>Quarterly<br>Payment | Early<br>Redemption<br>Payment |
|--|--|--------|--------|------------------------------------|---------------------------------|--|--------|--------|------------------------------------|--------------------------------|
|  | SPY  | IWM    | EWZ    |                                    |                                 | SPY  | IWM    | EWZ    |                                    |                                |
| #1                                     | 80.00  | 90.00  | 95.00  | \$0.25                             | N/A                             | 79.00  | 84.00  | 83.00  | \$0.25625                          | N/A                            |
| #2                                     | 90.00  | 95.00  | 101.00 | \$0.25625                          | N/A                             | 75.00  | 70.00  | 59.00  | \$0                                | N/A                            |
| #3                                     | 101.00   | 102.00 | 106.00 | \$0.25625                          | \$10.25625                      | 110.00   | 113.00 | 114.00 | \$0.25625                          | \$10.25625                     |
| Determination Dates #4 to #7 and Final | N/A  | N/A    | N/A    | N/A                                | N/A                             | N/A  | N/A    | N/A    | N/A                                | N/A                            |

Valuation Date

\* The Early Redemption Payment includes the unpaid contingent quarterly payment with respect to the determination date on which the determination closing price of each underlying is greater than or equal to its initial share price, and the securities are redeemed as a result.

In Example 1, the securities are automatically redeemed following the third determination date, as the determination closing price of each underlying on that determination date is greater than its initial share price. As the determination closing prices of each underlying on the first and second determination dates are greater than or equal to its coupon threshold price, you receive the contingent quarterly payment with respect to each such determination date.

Following the third determination date, you receive the early redemption payment, calculated as follows:  
stated principal amount + contingent quarterly payment = \$10 + \$0.25625 = \$10.25625

In this example, the early redemption feature limits the term of your investment to approximately 9 months, and you may not be able to reinvest at comparable terms or returns. If the securities are redeemed early, you will not receive any additional contingent quarterly payments.

In Example 2, the securities are automatically redeemed following the third determination date, as the determination closing price of each underlying on that determination date is greater than its initial share price. As the determination closing price of each underlying on the first and third determination dates are greater than its coupon threshold price, you receive the contingent quarterly payment of \$0.25625 with respect to each such determination date. Following the third determination date, you receive an early redemption payment of \$10.25625, which includes the contingent quarterly payment with respect to that determination date.

In this example, the early redemption feature limits the term of your investment to approximately 9 months, and you may not be able to reinvest at comparable terms or returns. If the securities are redeemed early, you will not receive any additional contingent quarterly payments. Further, although each underlying has appreciated by 10% or more from its initial share price on the third determination date, you only receive an early redemption payment of \$10.25625 per security and do not benefit from that appreciation.

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| Determination Dates  | Example 3   |                                      |                                      | Contingent Quarterly Payment | Early Redemption Payment | Example 4   |                                      |                                      | Contingent Quarterly Payment | Early Redemption Payment |
|----------------------|---|--------------------------------------|--------------------------------------|------------------------------|--------------------------|---|--------------------------------------|--------------------------------------|------------------------------|--------------------------|
|                      | Hypothetical Determination Closing Prices (or Final Share Prices) |                                      |                                      |                              |                          | Hypothetical Determination Closing Prices (or Final Share Prices) |                                      |                                      |                              |                          |
|                      | SPY   | IWM                                  | EWZ                                  |                              |                          | SPY   | IWM                                  | EWZ                                  |                              |                          |
| #1                   | 70.00   | 69.00                                | 59.00                                | \$0                          | N/A                      | 71.00   | 71.00                                | 58.00                                | \$0                          | N/A                      |
| #2 - #7              | Less than the Coupon Threshold Price                              | Less than the Coupon Threshold Price | Less than the Coupon Threshold Price | \$0                          | N/                       | Less than the Coupon Threshold Price                              | Less than the Coupon Threshold Price | Less than the Coupon Threshold Price | \$0                          | N/A                      |
| Final Valuation Date | 64.00   | 63.00                                | 55.00                                | \$0                          | N/A                      | 61.00   | 61.00                                | 61.00                                | \$0.25625*                   | N/A                      |
| Payment at Maturity  | \$5.50  |                                      |                                      | \$10.25625                   |                          |   |                                      |                                      |                              |                          |

\* The final contingent quarterly payment, if any, will be paid at maturity.

Examples 3 and 4 illustrate the payment at maturity per security based on the final share prices.

In Example 3, the determination closing price of one or more underlyings is below its coupon threshold price on every determination date. As a result, you do not receive any contingent quarterly payments during the term of the securities and, at maturity, you are fully exposed to the decline in the determination closing price of the worst performing underlying, because the final share price of that underlying is less than its downside threshold price.

Investors will receive an amount calculated as follows:

stated principal amount x share performance factor of the worst performing underlying =  $\$10 \times 0.55 = \$5.50$

In this example, the amount that you receive at maturity is significantly less than the stated principal amount.

In Example 4, the determination closing price of one or more underlyings is below its coupon threshold price on the each determination date. As a result, you do not receive any contingent quarterly payments as to those determination dates. Although the final share price of each underlying is less than its initial share price, because the final share price of each underlying is not less than its downside threshold price, you receive the stated principal amount plus a contingent quarterly payment with respect to the final determination date. Your payment at maturity is calculated as follows:

$\$10 + \$0.25625 = \$10.25625$

In this example, although the final share price of each underlying represents a 39% decline from its initial share price, you receive the stated principal amount per security plus the final contingent quarterly payment, equal to a total payment of \$10.25625 per security at maturity, because the final share price of each underlying is not less than its downside threshold price.



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Risk Factors

The following is a non-exhaustive list of certain key risk factors for investors in the securities. For further discussion of these and other risks, you should read the section entitled “Risk Factors” in the accompanying prospectus supplement and prospectus. You should also consult your investment, legal, tax, accounting and other advisers in connection with your investment in the securities.

The securities do not guarantee the return of any principal. The terms of the securities differ from those of ordinary debt securities in that the securities do not guarantee the payment of regular interest or the return of any of the principal amount at maturity. Instead, if the securities have not been automatically redeemed prior to maturity and if the final share price of the worst performing underlying is less than its downside threshold price, you will be exposed § to the decline in the closing price of that underlying share, as compared to its initial share price, on a 1 to 1 basis and you will receive for each security that you hold at maturity an amount equal to the stated principal amount times its share performance factor. In this case, the payment at maturity will be less than 60% of the stated principal amount and could be zero.

The potential contingent repayment of principal represented by the downside threshold prices applies only at maturity. If the securities are not redeemed, you should be willing to hold the securities until maturity. § Additionally, if the securities are not redeemed, at maturity, you will receive the stated principal amount only if the final share price of the worst performing underlying is greater than or equal to its downside threshold price. If you are able to sell the securities prior to maturity, you may have to sell them for a loss relative to the principal amount, even if the price of each of the underlying shares is at or above its downside threshold price.

You will not receive any contingent quarterly payment for any contingent payment date where the determination closing price of any underlying on the preceding determination date is less than its coupon threshold price. A contingent quarterly payment will be made with respect to a contingent payment date only if the determination closing price (or final share price, as applicable) of each underlying on the relevant determination date is greater than or equal to its coupon threshold price. It is possible that the applicable price of one or more underlyings could be § below its respective coupon threshold price on one or more determination dates, so that you will receive few or no contingent quarterly payments. If the determination closing price (or final share price, as applicable) of any underlying on a determination date is below its coupon threshold price, you will not receive any contingent quarterly payments for the related contingent payment date, even if the closing price of that underlying was at or above its coupon threshold price on most or all of the other trading days prior to that determination date and even if the applicable prices of the other underlyings were at or above their respective coupon threshold prices on the applicable determination date.

Your return on the securities may be lower than the return on a conventional debt security of comparable maturity. § The return that you will receive on the securities, which could be negative, may be less than the return you could earn on other investments. Your investment may not reflect the full opportunity cost to you when you take into account factors that affect the time value of money, such as inflation.

Investors will not participate in any appreciation in the price of any of the underlying shares. Investors will not participate in any appreciation in the price of any of the underlying shares from their respective initial share prices, and the return on the securities will be limited to the contingent quarterly payments, if any, that are payable. The payment at maturity will not exceed the principal amount plus the final contingent quarterly payment, if it is § payable. It is possible that the applicable price of one or more of the underlying shares could be below their respective coupon barrier prices on most or all of the quarterly determination dates so that you will receive few or no contingent quarterly payments. If you do not earn sufficient contingent quarterly payments over the term of the securities, the overall return on the securities may be less than the amount that would be paid on one of our conventional debt securities of comparable maturity.

§ The automatic early redemption feature may limit the term of your investment to approximately three months. If the securities are redeemed early, you may not be able to reinvest at comparable terms or returns. The term of your investment in the securities may be limited to as short as approximately three months by the automatic early

redemption feature. If the securities are redeemed prior

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to maturity, you will receive no more contingent quarterly payments and may be forced to invest in a lower interest rate environment and may not be able to reinvest at comparable terms or returns.

Your return on the securities is not linked to a basket of the underlyings. Rather, it will be contingent upon the independent performance of each underlying. Unlike an instrument with a return linked to a basket of underlying assets, in which risk may be mitigated and diversified among all the basket components, you will be exposed to the risks related to each of the underlyings. Poor performance by any underlying over the term of the securities may negatively affect your return and will not be offset or mitigated by any positive performance by the other underlyings. To receive any contingent quarterly payments, each underlying must close at or above its coupon barrier price on the applicable determination date. In addition, if any underlying has declined below its downside threshold price as of the final valuation date, you will be fully exposed to the decrease in the worst performing underlying over the term of the securities on a 1 to 1 basis, even if one or both of the other underlyings has appreciated. Accordingly, your investment is subject to the price risk of each underlying.

Because the securities are linked to the performance of the worst performing underlying, you are exposed to greater risks of receiving no contingent quarterly payments and sustaining a significant loss on your investment than if the securities were linked to just one underlying. The risk that you will not receive any contingent quarterly payments, or that you will suffer a significant loss on your investment, is greater if you invest in the securities as opposed to substantially similar securities that are linked to the performance of just one underlying. With three underlyings, it is more likely that one or more of the underlyings will close below their respective coupon threshold prices on any determination date or their respective downside threshold prices on the final valuation date than if the securities were linked to only one underlying. Therefore, it is more likely that you will not receive any contingent quarterly payments, and that you will suffer a significant loss on your investment.

The market price of the securities will be influenced by many unpredictable factors. Many factors will influence the value of the securities in the secondary market and the price at which RBCCM may be willing to purchase or sell the securities in the secondary market. Although we expect that generally the closing price of the underlying shares on any day may affect the value of the securities more than any other single factor, other factors that may influence the value of the securities include:

§ the trading price and volatility (frequency and magnitude of changes in value) of the underlying shares;

§ dividend rates on the underlying shares and on the securities held by each underlying;

§ interest and yield rates in the market;

§ exchange rates between the U.S. dollar and the Brazilian real, which is the principal currency in which the securities held by the EWZ are traded;

§ the time remaining until the securities mature;

§ geopolitical conditions and economic, financial, political, regulatory or judicial events that affect the underlying shares or securities markets generally and which may affect the price of the underlying shares;

§ the occurrence of certain events affecting one or more of the underlying shares that may or may not require an adjustment to the adjustment factor; and

§ any actual or anticipated changes in our credit ratings or credit spreads.

The price of the underlying shares may be, and have recently been, volatile, and we can give you no assurance that the volatility will lessen. You may receive less, and possibly significantly less, than the stated principal amount per security if you try to sell your securities prior to maturity.

§ The securities are subject to our credit risk, and any actual or anticipated changes to its credit ratings or credit spreads may adversely affect the market value of the securities. You are dependent on our ability to pay all amounts due on the securities on each contingent payment date, upon automatic redemption or at maturity, and therefore you are subject to our credit risk. If we default on our obligations under the securities, your investment would be at risk and you could lose some or all of your investment. As a result, the market value of the securities prior to maturity will be affected by changes in the market's view of our creditworthiness. Any actual or anticipated decline in our

credit ratings or increase in the credit

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spreads charged by the market for taking our credit risk is likely to adversely affect the market value of the securities.

If the prices of the underlying shares changes, the market value of the securities may not change in the same manner.

Owning the securities is not the same as owning any of the underlying shares. Accordingly, changes in the prices of the underlying shares may not result in a comparable change of the market value of the securities. If the closing § prices of one or more of the underlying shares on any trading day increase above the initial share price or the downside threshold price, the value of the securities may not increase in a comparable manner, if at all. It is possible for the prices of the underlying shares to increase while the value of the securities declines.

The historical performance of the underlying shares should not be taken as an indication of their future performance. The prices of each of the underlying shares will determine the amounts to be paid on the securities. The historical performance of the underlying shares does not give an indication of their future performance. As a result, it is § impossible to predict whether the prices of the underlying shares will rise or fall during the term of the securities.

The prices of the underlying shares will be influenced by complex and interrelated political, economic, financial and other factors. The value of the underlying shares may decrease such that you may not receive any return of your investment or any contingent quarterly payment. There can be no assurance that the prices of the underlying shares will not decrease so that at maturity you will not lose a significant portion or all of your investment.

The securities will not be listed on any securities exchange and secondary trading may be limited. The securities will not be listed on any securities exchange. Therefore, there may be little or no secondary market for the securities. RBCCM may, but is not obligated to, make a market in the securities, and, if it chooses to do so, it may cease doing so at any time. When it does make a market, it will generally do so for transactions of routine secondary market size at prices based on its estimate of the current value of the securities, taking into account its bid/offer spread, our credit spreads, market volatility, the notional size of the proposed sale, the cost of unwinding any related § hedging positions, the time remaining to maturity and the likelihood that it will be able to resell the securities. Even if there is a secondary market, it may not provide enough liquidity to allow you to trade or sell the securities easily. Because we do not expect that other broker-dealers will participate significantly in the secondary market for the securities, the price at which you may be able to trade your securities is likely to depend on the price, if any, at which RBCCM is willing to transact. If, at any time, RBCCM were to cease making a market in the securities, it is likely that there would be no secondary market for the securities. Accordingly, you should be willing to hold your securities to maturity.

The initial estimated value of the securities will be less than the price to the public. The initial estimated value that will be set forth in the final pricing supplement for the securities does not represent a minimum price at which we, RBCCM or any of our affiliates would be willing to purchase the securities in any secondary market (if any exists) at any time. If you attempt to sell the securities prior to maturity, their market value may be lower than the price you paid for them and the initial estimated value. This is due to, among other things, changes in the price of the underlying shares, the borrowing rate we pay to issue securities of this kind, and the inclusion in the price to the public of the agent's commissions and the estimated costs relating to our hedging of the securities. These factors, together with various credit, market and economic factors over the term of the securities, are expected to reduce the § price at which you may be able to sell the securities in any secondary market and will affect the value of the securities in complex and unpredictable ways. Assuming no change in market conditions or any other relevant factors, the price, if any, at which you may be able to sell your securities prior to maturity may be less than your original purchase price, as any such sale price would not be expected to include the agent's commissions and the hedging costs relating to the securities. In addition to bid-ask spreads, the value of the securities determined for any secondary market price is expected to be based on the secondary rate rather than the internal funding rate used to price the securities and determine the initial estimated value. As a result, the secondary price will be less than if the internal funding rate was used. The securities are not designed to be short-term trading instruments. Accordingly, you should be able and willing to hold your securities to maturity.

Our initial estimated value of the securities is an estimate only, calculated as of the time the terms of the securities § are set. The initial estimated value of the securities is based on the value of our



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obligation to make the payments on the securities, together with the mid-market value of the derivative embedded in the terms of the securities. See “Additional Information About the Securities—Structuring the securities” below. Our estimate is based on a variety of assumptions, including our credit spreads, expectations as to dividends, interest rates and volatility, and the expected term of the securities. These assumptions are based on certain forecasts about future events, which may prove to be incorrect. Other entities may value the securities or similar securities at a price that is significantly different than we do.

The value of the securities at any time after the pricing 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 securities in any secondary market, if any, should be expected to differ materially from the initial estimated value of your securities.

Adjustments to an underlying or to its underlying index could adversely affect the value of the securities. The investment advisor of each underlying, and the sponsor of each underlying index, may add, delete or substitute the shares held by the applicable underlying or the securities constituting the underlying index, as applicable, or make § other methodological changes. In addition, the investment advisor or the index sponsor may discontinue or suspend maintenance of the applicable underlying or the underlying index, as applicable, at any time. Any of these actions could affect the value of and the return on the securities.

We have no affiliation with any underlying’s investment advisor and will not be responsible for any actions taken by it. We have no affiliation with the investment advisors to the underlyings, and those advisors will not be involved in the offering of the securities. Consequently, we have no control over their actions, including any actions of the type § that could affect the underlyings, and therefore, the value of the underlying shares. These investment advisors have no obligation of any sort with respect to the securities. Thus, they have no obligation to take your interests into consideration for any reason, including in taking any actions that might affect the value of the securities.

Investing in the securities is not equivalent to investing in the underlying shares. Investing in the securities § is not equivalent to investing in the underlyings or their respective component securities. Investors in the securities will not have voting rights or rights to receive dividends or other distributions or any other rights with respect to the underlying shares or the securities held by the underlyings.

The underlyings and their underlying indices are different. The performance of each of the underlyings may not exactly replicate the performance of its underlying index, because the performance of each underlying will reflect transaction costs and fees that are not included in the calculation of its underlying index. It is also possible that the § performance of an underlying may not fully replicate or may in certain circumstances diverge significantly from the performance of its underlying index due to the temporary unavailability of certain securities in the secondary market, the performance of any derivative instruments contained in that underlying, differences in trading hours between that underlying and the underlying index, or due to other circumstances.

During periods of market volatility, securities underlying an underlying may be unavailable in the secondary market, market participants may be unable to calculate accurately the net asset value per share of an underlying and the liquidity of an underlying may be adversely affected. This kind of market volatility may also disrupt the ability of market participants to create and redeem shares of an underlying. Further, market volatility may adversely affect, sometimes materially, the prices at which market participants are willing to buy and sell shares of an underlying. As a result, under these circumstances, the market value of shares of an underlying may vary substantially from the net asset value per share of that underlying. For all of the foregoing reasons, the performance of an underlying may not correlate with the performance of its underlying index as well as its net asset value per share, which could materially and adversely affect the value of the securities in the secondary market and/or reduce your payments on the securities.

An investment in the securities is subject to management risks. The underlyings are not managed according to traditional methods of “active” investment management, which involve the buying and selling of securities based on § economic, financial and market analysis and investment judgment. Instead, each underlying, utilizing a “passive” or indexing investment approach, attempts to approximate the investment performance of its underlying index by investing in a portfolio of securities that generally replicates its





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underlying index. Therefore, unless a specific security is removed from its underlying index, the applicable underlying generally would not sell a security because the security's issuer was in financial trouble. In addition, each underlying is subject to the risk that the investment strategy of its investment advisor may not produce the intended results.

The securities are subject to small-capitalization risks. The IWM tracks companies that may be considered small-capitalization companies. These companies often have greater stock price volatility, lower trading volume and less liquidity than large-capitalization companies and therefore the price of the IWM may be more volatile than an investment in stocks issued by large-capitalization companies. Stock prices of small-capitalization companies may also be more vulnerable than those of large-capitalization companies to adverse business and economic developments, and the stocks of small-capitalization companies may be thinly traded, making it difficult for the § IWM to track them. In addition, small-capitalization companies are often less stable financially than large-capitalization companies and may depend on a small number of key personnel, making them more vulnerable to loss of personnel. Small-capitalization companies are often subject to less analyst coverage and may be in early, and less predictable, periods of their corporate existences. These companies tend to have smaller revenues, less diverse product lines, smaller shares of their product or service markets, fewer financial resources and less competitive strengths than large-capitalization companies and are more susceptible to adverse developments related to their products.

The securities are subject to risks associated with non-U.S. companies. The price of the EWZ depends upon the stocks of non-U.S. companies, and thus involves risks associated with the prices of these non-U.S. stocks may be affected by political, economic, financial and social factors in Brazil, including changes in that country's government, economic and fiscal policies, currency exchange laws or other laws or restrictions, which could affect the value of the securities. These foreign securities may have less liquidity and could be more volatile than many of the securities § traded in U.S. or other securities markets. Direct or indirect government intervention to stabilize the Brazilian securities markets, as well as cross shareholdings in Brazilian companies, may affect trading levels or prices and volumes in those markets. The other special risks associated with Brazilian securities may include, but are not limited to: less liquidity and smaller market capitalizations; less rigorous regulation of securities markets; different accounting and disclosure standards; governmental interference; currency fluctuations; higher inflation; and social, economic and political uncertainties. These factors may adversely affect the performance of the EWZ and, as a result, the value of the securities.

There are risks associated with emerging markets. Because the EWZ is an underlying, investment in the securities will involve risks not generally associated with investments which have no emerging market component. In particular, many emerging nations are undergoing rapid change, involving the restructuring of economic, political, § financial and legal systems. Regulatory and tax environments may be subject to change without review or appeal. Many emerging markets suffer from underdevelopment of capital markets and tax regulation. The risk of expropriation and nationalization remains a threat. Guarding against these risks may be made more difficult by lower levels of corporate disclosure and unreliability of economic and financial data.

§ The securities will not be adjusted for changes in exchange rates. Although the equity securities composing the EWZ are traded in Brazilian real, and the securities are denominated in U.S. dollars, the amount payable on the securities at maturity will not be adjusted for changes in the exchange rates between the U.S. dollar and the Brazilian real. Changes in exchange rates, however, may also reflect changes in the Brazilian real that in turn may affect the price of the EWZ, and therefore the securities. The amount we pay in respect of the securities will be determined solely in accordance with the procedures described in this document.

The securities are not designed to be short-term trading instruments. The price at which you will be able to sell the securities to us or our affiliates prior to maturity, if at all, may be at a substantial discount from the principal amount of the securities, even in cases where the closing price of any of the underlying shares has appreciated since the § pricing date. In addition, you may receive less, and possibly significantly less, than the stated principal amount of your securities if you try to sell your securities prior to the maturity date, and you will not receive the benefit of any contingent repayment of principal represented by the downside threshold price.



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Hedging and trading activity by our subsidiaries could potentially adversely affect the value of the securities. One or more of our subsidiaries and/or third-party dealers expect to carry out hedging activities related to the securities (and to other instruments linked to the underlying shares), including trading in the underlying shares and the securities held by each underlying. Some of our subsidiaries also trade the underlying shares and other financial instruments related to the underlying shares on a regular basis as part of their general broker-dealer and other businesses. Any of these hedging or trading activities on or prior to the pricing date could potentially increase one or more of the initial § share prices, and, as a result, the applicable coupon barrier price and the downside threshold price, which is the price at or above which the applicable underlying share must close on a determination date in order for you to earn a contingent quarterly payment or, if the securities are not called prior to maturity, in order for you to avoid being exposed to the negative price performance of the worst performing underlying at maturity. Additionally, such hedging or trading activities during the term of the securities could potentially affect the price of the underlying shares, and, accordingly, whether the securities are automatically called prior to maturity, and, if the securities are not called prior to maturity, the payout to you at maturity, if any.

You must rely on your own evaluation of the merits of an investment linked to the underlying shares. In the ordinary course of their business, our affiliates may have expressed views on expected movement in one or more of the underlying shares, and may do so in the future. These views or reports may be communicated to our clients and § clients of our affiliates. However, these views are subject to change from time to time. Moreover, other professionals who transact business in markets relating to the underlying shares may at any time have significantly different views from those of our affiliates. For these reasons, you are encouraged to derive information concerning the underlying shares from multiple sources, and you should not rely solely on views expressed by our affiliates.

Our business activities may create conflicts of interest. We and our affiliates may engage in trading activities related to the underlying shares or the securities held by the underlyings that are not for the account of holders of the securities or on their behalf. These trading activities may present a conflict between the holders' interest in the securities and the interests we and our affiliates will have in proprietary accounts, in facilitating transactions, § including options and other derivatives transactions, for our customers and in accounts under our management. RBCCM and these affiliates may also issue or underwrite or assist unaffiliated entities in the issuance or underwriting of other securities or financial instruments linked to the underlying shares. To the extent that we or one of our affiliates serves as issuer, agent or underwriter for those securities or financial instruments, our or their interests with respect to those products may be adverse to those of the holders of the securities. These trading activities could be adverse to the interests of the holders of the securities.

We and our affiliates may presently or from time to time engage in business with one or more of the issuers of the securities held by one or more of the underlyings. This business may include extending loans to, or making equity investments in, such companies or providing advisory services to such companies, including merger and acquisition advisory services. In the course of business, we and our affiliates may acquire non-public information relating to these companies, which we have no obligation to disclose to you, and, in addition, one or more of our affiliates may publish research reports about these companies. Neither we nor the agent have made any independent investigation regarding any matters whatsoever relating to the issuers of the securities held by the underlyings.

Moreover, we and our affiliates may have published, and in the future expect to publish, research reports with respect to the underlying shares or the securities held by the underlyings. This research is modified from time to time without notice and may express opinions or provide recommendations that are inconsistent with purchasing or holding the securities. Any of these activities by us or one or more of our affiliates may affect the price of the underlying shares and, therefore, the market value of the securities.

§ The calculation agent, which is a subsidiary of the issuer, will make determinations with respect to the securities.

Our wholly owned subsidiary, RBCCM, will serve as the calculation agent. As calculation agent, RBCCM will determine each initial share price, the coupon barrier prices, the downside threshold prices, the final share prices, whether the contingent quarterly payment will be paid on each contingent payment date, whether the securities will be redeemed following any determination date, whether a market disruption event has occurred, whether to make

any adjustments to the adjustment factor for each underlying share and the payment that you will receive upon an automatic early redemption or at maturity,

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if any. Any of these determinations made by RBCCM, in its capacity as calculation agent, including with respect to the occurrence or non-occurrence of market disruption events or the selection of a successor fund, may require RBCCM to exercise discretion or make subjective judgments and may affect the payout to you upon an automatic early redemption or at maturity, if any.

We will not hold any underlying shares for your benefit. The indenture and the terms governing the securities 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 of the underlying shares that we or they may acquire. Neither we nor our affiliates will pledge or otherwise hold § any such shares for your benefit. Consequently, in the event of our bankruptcy, insolvency or liquidation, any of those assets that we own will be subject to the claims of our creditors generally and will not be available for your benefit specifically.

The anti-dilution adjustments that the calculation agent is required to make do not cover every event that could affect the underlying shares. RBCCM, as calculation agent, will adjust the adjustment factor for certain events affecting § the underlying shares. However, the calculation agent will not make an adjustment for every event that could affect one or more of the underlying shares. If an event occurs that does not require the calculation agent to adjust the adjustment factor, the market price of the securities may be materially and adversely affected.

Significant aspects of the income tax treatment of an investment in the securities are uncertain. The tax treatment of an investment in the securities is uncertain. We do not plan to request a ruling from the Internal Revenue Service (the “IRS”) or the Canada Revenue Agency regarding the tax treatment of an investment in the securities, and the IRS, § the Canada Revenue Agency or a court may not agree with the tax treatment described in this document. Although the U.S. federal income tax treatment of the contingent quarterly payments is uncertain, we intend to take the position that the contingent quarterly payments constitute taxable ordinary income to a U.S. holder at the time received or accrued in accordance with the holder’s regular method of tax accounting.

The IRS has issued a notice indicating that it and the U.S. Treasury Department are actively considering whether, among other issues, the holder of an instrument such as the securities should be required to accrue ordinary income on a current basis. The outcome of this process is uncertain and could apply on a retroactive basis.

Please read carefully the section entitled “Additional Information About the Securities – U.S. tax considerations” in this document, the section “Tax Consequences—United States Taxation” in the accompanying prospectus and the section entitled “Certain Income Tax Consequences” in the accompanying prospectus supplement. You should consult your tax advisor about your own tax situation.

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

A 30% U.S. federal withholding tax will be withheld on contingent quarterly payments paid to non-U.S. holders. While the U.S. federal income tax treatment of the securities (including proper characterization of the contingent quarterly payments for U.S. federal income tax purposes) is uncertain, U.S. federal income tax at a 30% rate (or at a § lower rate under an applicable income tax treaty) will be withheld in respect of the contingent quarterly payments paid to a non-U.S. holder unless such payments are effectively connected with the conduct by the non-U.S. holder of a trade or business in the U.S. (in which case, to avoid withholding, the non-U.S. holder will be required to provide a Form W-8ECI). We will not pay any additional amounts in respect of such withholding.

Please read carefully the section entitled “U.S. tax considerations” in this document, the section “Tax Consequences—United States Taxation” in the accompanying prospectus and the section entitled “Certain Income Tax Consequences” in the accompanying prospectus supplement. You should consult your tax advisor about your own tax situation.



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#### Information About the Underlyings

All disclosures contained in this document regarding the underlyings, including, without limitation, their make-up, method of calculation, and changes in their components, have been derived from publicly available sources. The information reflects the policies of, and is subject to change by, the applicable index sponsor or investment advisor. Each of these entities has no obligation to continue to publish, and may discontinue publication of, the applicable underlying. The consequences of an index sponsor or an investment advisor discontinuing publication or making other changes to a underlying are discussed below in the section entitled “Additional Information About the Securities—Discontinuation of/adjustments to the underlyings” or “—adjustment factor,” as applicable. Neither we nor RBCCM accepts any responsibility for the calculation, maintenance or publication of any underlying or any successor index or successor to any underlying.

Information provided to or filed with the SEC as to each underlying, including its most recent prospectus and its periodic reports, 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). We are not incorporating by reference into this document any of those documents.

The selection of the underlyings is not a recommendation to invest in any underlying. Neither we nor any of our affiliates make any representation to you as to the future performance of any underlying.

#### SPDR® S&P® 500 ETF Trust (the “SPY”)

SPDR® and S&P 500® are trademarks of Standard & Poor’s Financial Services LLC (“S&P Financial”). The securities are not sponsored, endorsed, sold or promoted by the SPDR® S&P 500® ETF Trust (the “SPDR Trust”) or S&P Financial. Neither the SPDR Trust nor S&P Financial makes any representations or warranties to the holders of the securities or any member of the public regarding the advisability of investing in the securities. Neither the SPDR Trust nor S&P Financial will have any obligation or liability in connection with the registration, operation, marketing, trading or sale of the securities or in connection with our use of information about the SPDR Trust.

The shares of the SPDR® S&P 500® ETF trade on the NYSE Arca under the symbol “SPY.” The SPY’s investment adviser is State Street Global Advisors.

The SPY seeks to provide investment results that correspond generally to the price and yield performance, before fees and expenses, of the S&P 500® Index (the “SPX Index”). To maintain the correspondence between the composition and weightings of stocks held by the SPY and component stocks of the SPX Index, the SPY adjusts its holdings from time to time to conform to periodic changes in the identity and/or relative weightings of the index securities.

The SPY utilizes a “passive” or “indexing” investment approach in attempting to track the performance of the SPX Index.

The SPY seeks to invest in substantially all of the securities that comprise the SPX Index. The SPY typically earns income from dividends from securities that it holds. These amounts, net of expenses and taxes (if applicable), are passed along to the SPY’s shareholders as “ordinary income.” In addition, the SPY realizes capital gains or losses whenever it sells securities. Net long-term capital gains are distributed to shareholders as “capital gain distributions.”

#### The S&P 500® Index (“SPX Index”)

The SPX Index is intended to provide an indication of the pattern of common stock price movement. The calculation of the level of the SPX Index is based on the relative value of the aggregate market value of the common stocks of 500 companies as of a particular time compared to the aggregate average market value of the common stocks of 500 similar companies during the base period of the years 1941 through 1943.

S&P calculates the SPX Index by reference to the prices of the constituent stocks of the SPX Index without taking account of the value of dividends paid on those stocks. As a result, the return on the securities will not reflect the return you would realize if you actually owned the SPX Index constituent stocks and received the dividends paid on those stocks.

Effective with the September 2015 rebalance, consolidated share class lines will no longer be included in the SPX Index. Each share class line will be subject to public float and liquidity criteria individually, but the company’s total market capitalization will be used to evaluate each share class line. This may result in one listed share class line of a company being included in the SPX Index while a second listed share class line of the same company is excluded.

#### Computation of the SPX Index

While S&P currently employs the following methodology to calculate the SPX Index, no assurance can be given that S&P will not modify or change this methodology in a manner that may affect the payments on the securities. Historically, the market value of any component stock of the SPX Index was calculated as the product of the market price per share and the number of then outstanding shares of such component stock. In March 2005, S&P began shifting the SPX Index halfway from a market capitalization weighted formula to a float-adjusted formula, before moving the SPX Index to full float adjustment on September 16, 2005. S&P's criteria for selecting stocks for the SPX Index did not change with the shift to float adjustment. However, the adjustment affects each company's weight in the SPX Index.

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Under float adjustment, the share counts used in calculating the SPX Index reflect only those shares that are available to investors, not all of a company's outstanding shares. Float adjustment excludes shares that are closely held by control groups, other publicly traded companies or government agencies.

In September 2012, all shareholdings representing more than 5% of a stock's outstanding shares, other than holdings by "block owners," were removed from the float for purposes of calculating the SPX Index. Generally, these "control holders" will include officers and directors, private equity, venture capital and special equity firms, other publicly traded companies that hold shares for control, strategic partners, holders of restricted shares, ESOPs, employee and family trusts, foundations associated with the company, holders of unlisted share classes of stock, government entities at all levels (other than government retirement/pension funds) and any individual person who controls a 5% or greater stake in a company as reported in regulatory filings. However, holdings by block owners, such as depositary banks, pension funds, mutual funds and ETF providers, 401(k) plans of the company, government retirement/pension funds, investment funds of insurance companies, asset managers and investment funds, independent foundations and savings and investment plans, will ordinarily be considered part of the float.

Treasury stock, stock options, equity participation units, warrants, preferred stock, convertible stock, and rights are not part of the float. Shares held in a trust to allow investors in countries outside the country of domicile, such as depositary shares and Canadian exchangeable shares are normally part of the float unless those shares form a control block.

For each stock, an investable weight factor ("IWF") is calculated by dividing the available float shares by the total shares outstanding. Available float shares are defined as the total shares outstanding less shares held by control holders. This calculation is subject to a 5% minimum threshold for control blocks. For example, if a company's officers and directors hold 3% of the company's shares, and no other control group holds 5% of the company's shares, S&P would assign that company an IWF of 1.00, as no control group meets the 5% threshold. However, if a company's officers and directors hold 3% of the company's shares and another control group holds 20% of the company's shares, S&P would assign an IWF of 0.77, reflecting the fact that 23% of the company's outstanding shares are considered to be held for control. As of July 31, 2017, companies with multiple share class lines are no longer eligible for inclusion in the SPX Index. Constituents of the SPX Index prior to July 31, 2017 with multiple share class lines will be grandfathered in and continue to be included in the SPX Index. If a constituent company of the SPX Index reorganizes into a multiple share class line structure, that company will remain in the SPX Index at the discretion of the S&P Index Committee in order to minimize turnover.

The SPX Index is calculated using a base-weighted aggregate methodology. The level of the SPX Index reflects the total market value of all 500 component stocks relative to the base period of the years 1941 through 1943. An indexed number is used to represent the results of this calculation in order to make the level easier to use and track over time. The actual total market value of the component stocks during the base period of the years 1941 through 1943 has been set to an indexed level of 10. This is often indicated by the notation 1941-43 = 10. In practice, the daily calculation of the SPX Index is computed by dividing the total market value of the component stocks by the "index divisor." By itself, the index divisor is an arbitrary number. However, in the context of the calculation of the SPX Index, it serves as a link to the original base period level of the SPX Index. The index divisor keeps the SPX Index comparable over time and is the manipulation point for all adjustments to the SPX Index, which is index maintenance.

#### Index Maintenance

Index maintenance includes monitoring and completing the adjustments for company additions and deletions, share changes, stock splits, stock dividends, and stock price adjustments due to company restructuring or spinoffs. Some corporate actions, such as stock splits and stock dividends, require changes in the common shares outstanding and the stock prices of the companies in the SPX Index, and do not require index divisor adjustments.

To prevent the level of the SPX Index from changing due to corporate actions, corporate actions which affect the total market value of the SPX Index require an index divisor adjustment. By adjusting the index divisor for the change in market value, the level of the SPX Index remains constant and does not reflect the corporate actions of individual companies in the SPX Index. Index divisor adjustments are made after the close of trading and after the calculation of

the SPX Index closing level.

Changes in a company's total shares outstanding of 5% or more due to public offerings are made as soon as reasonably possible. Other changes of 5% or more (for example, due to tender offers, Dutch auctions, voluntary exchange offers, company stock repurchases, private placements, acquisitions of private companies or non-index companies that do not trade on a major exchange, redemptions, exercise of options, warrants, conversion of preferred stock, notes, debt, equity participations, at-the-market stock offerings or other recapitalizations) are made weekly, and are generally announced on Fridays for implementation after the close of trading the following Friday (one week later). If a 5% or more share change causes a company's IWF to change by five percentage points or more, the IWF is updated at the same time as the share change. IWF changes resulting from partial tender offers are considered on a case-by-case basis.

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SPDR® S&P® 500 ETF Trust

Information as of market close on March 18, 2019:

|                             |               |                                     |
|-----------------------------|---------------|-------------------------------------|
| Bloomberg Index Symbol: SPY | 52 Weeks Ago: | 270.49                              |
| Current Level:              | 282.33        | 52 Week High (on 9/20/2018): 293.58 |
|                             |               | 52 Week Low (on 12/24/2018): 234.34 |

SPDR® S&P® 500 ETF Trust – Historical Closing Levels

January 1, 2014 to March 18, 2019

| High   | Low    | Period         | End    |
|--------|--------|----------------|--------|
| 2014   |        |                |        |
| 188.26 | 174.17 | First Quarter  | 187.01 |
| 196.48 | 181.51 | Second Quarter | 195.72 |
| 201.82 | 191.03 | Third Quarter  | 197.02 |
| 208.72 | 186.27 | Fourth Quarter | 205.54 |
| 2015   |        |                |        |
| 211.99 | 199.02 | First Quarter  | 206.43 |
| 213.50 | 205.42 | Second Quarter | 205.85 |
| 212.59 | 187.27 | Third Quarter  | 191.63 |
| 211.00 | 192.13 | Fourth Quarter | 203.87 |
| 2016   |        |                |        |
| 206.02 | 182.86 | First Quarter  | 205.52 |
| 212.37 | 199.60 | Second Quarter | 209.48 |
| 219.09 | 208.41 | Third Quarter  | 216.30 |
| 227.76 | 208.55 | Fourth Quarter | 223.53 |
| 2017   |        |                |        |
| 239.78 | 225.24 | First Quarter  | 235.74 |
| 244.66 | 232.51 | Second Quarter | 241.80 |
| 251.23 | 240.55 | Third Quarter  | 251.23 |
| 268.20 | 252.32 | Fourth Quarter | 266.86 |
| 2018   |        |                |        |
| 286.58 | 257.63 | First Quarter  | 263.15 |
| 278.92 | 257.47 | Second Quarter | 271.28 |
| 293.58 | 270.90 | Third Quarter  | 290.72 |
| 291.73 | 234.34 | Fourth Quarter | 249.92 |

2019

First Quarter (through March 18, 2019) 282.33 244.21 282.33

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iShares® Funds

iShares consists of numerous separate investment portfolios (the “iShares Funds”), including the iShares Russell 2000 ETF (the “IWM”) and the iShares MSCI Brazil ETF (the “EWZ”). Each of the IWM and the EWZ seeks investment results that correspond generally to the price and yield performance, before fees and expenses, of their respective underlying indices. The IWM and the EWZ typically earn income from dividends from securities held by the IWM and the EWZ. These amounts, net of expenses and taxes (if applicable), are passed along to shareholders of the IWM and the EWZ as “ordinary income.” In addition, the IWM and the EWZ realize capital gains or losses whenever they sell securities. Net long-term capital gains are distributed to their respective shareholders as “capital gain distributions.” However, because the applicable securities are linked only to the share price of the applicable underlying, you will not be entitled to receive income, dividend, or capital gain distributions from the applicable underlying or any equivalent payments.

“iShare®” and “BlackRock®” are registered trademarks of BlackRock®. The securities are not sponsored, endorsed, sold, or promoted by BlackRock®, or by any of the iShares® Funds. Neither BlackRock® nor the iShares® Funds make any representations or warranties to the owners of any of the securities or any member of the public regarding the advisability of investing in any of the securities. Neither BlackRock® nor the iShares® Funds shall have any obligation or liability in connection with the registration, operation, marketing, trading, or sale of any of the securities or in connection with our use of information about any of the underlyings or any of the iShares® Funds.

The iShares® Russell 2000 ETF (the “IWM”)

The IWM seeks investment results that correspond generally to the price and yield performance, before fees and expenses, of the Russell 2000® Index. The shares of this underlying trade on the NYSE Arca, Inc. under the symbol “IWM.”

Russell 2000® Index

The Russell 2000® Index (Bloomberg L.P. index symbol “RTY”) was developed by Russell Investments (“Russell”) before FTSE International Limited (“FTSE”) and Russell combined in 2015 to create FTSE Russell, which is wholly owned by London Stock Exchange Group. Russell began dissemination of the RTY on January 1, 1984. FTSE Russell calculates and publishes the RTY. The RTY was set to 135 as of the close of business on December 31, 1986. The RTY is designed to track the performance of the small capitalization segment of the U.S. equity market. As a subset of the Russell 3000® Index, the RTY consists of the smallest 2,000 companies included in the Russell 3000® Index. The Russell 3000® Index measures the performance of the largest 3,000 U.S. companies, representing approximately 98% of the investable U.S. equity market. The RTY is determined, comprised, and calculated by FTSE Russell without regard to the securities.

Selection of Stocks Comprising the RTY

All companies eligible for inclusion in the RTY must be classified as a U.S. company under the index sponsor’s country-assignment methodology. If a company is incorporated, has a stated headquarters location, and trades in the same country (American Depositary Receipts and American Depositary Shares are not eligible), then the company is assigned to its country of incorporation. If any of the three factors are not the same, the index sponsor defines three Home Country Indicators (“HCIs”): country of incorporation, country of headquarters, and country of the most liquid exchange (as defined by a two-year average daily dollar trading volume) (“ADDTV”) from all exchanges within a country. Using the HCIs, the index sponsor compares the primary location of the company’s assets with the three HCIs. If the primary location of its assets matches any of the HCIs, then the company is assigned to the primary location of its assets. If there is insufficient information to determine the country in which the company’s assets are primarily located, the index sponsor will use the primary country from which the company’s revenues are primarily derived for the comparison with the three HCIs in a similar manner. The index sponsor uses the average of two years of assets or revenues data to reduce potential turnover. If conclusive country details cannot be derived from assets or revenues data, the index sponsor will assign the company to the country of its headquarters, which is defined as the address of the company’s principal executive offices, unless that country is a Benefit Driven Incorporation “BDI” country, in which case the company will be assigned to the country of its most liquid stock exchange. BDI countries

include: Anguilla, Antigua and Barbuda, Aruba, Bahamas, Barbados, Belize, Bermuda, Bonaire, British Virgin Islands, Cayman Islands, Channel Islands, Cook Islands, Curacao, Faroe Islands, Gibraltar, Guernsey, Isle of Man, Jersey, Liberia, Marshall Islands, Panama, Saba, Sint Eustatius, Sint Maarten, and Turks and Caicos Islands. For any companies incorporated or headquartered in a U.S. territory, including countries such as Puerto Rico, Guam, and U.S. Virgin Islands, a U.S. HCI is assigned.

All securities eligible for inclusion in the RTY must trade on a major U.S. exchange. Stocks must have a closing price at or above \$1.00 on their primary exchange on the last trading day in May to be eligible for inclusion during annual reconstitution. However, in order to reduce unnecessary turnover, if an existing member's closing price is less than \$1.00 on the last day of May, it will be considered eligible if the average of the daily closing prices (from its primary exchange) during the month of May is equal to or greater than \$1.00. Initial public offerings are added each quarter and must have a closing price at or above \$1.00 on the last day of their eligibility period in order to qualify for index inclusion. If an existing stock does not trade on the "rank day" (typically the last trading day in May, but a confirmed timetable is announced each spring), but does have a closing price at or above \$1.00 on another eligible U.S. exchange, that stock will be eligible for inclusion.

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An important criterion used to determine the list of securities eligible for the RTY is total market capitalization, which is defined as the market price as of the rank day in May for those securities being considered at annual reconstitution times the total number of shares outstanding. Where applicable, common stock, non-restricted exchangeable shares and partnership units/membership interests are used to determine market capitalization. Any other form of shares such as preferred stock, convertible preferred stock, redeemable shares, participating preferred stock, warrants, rights, installment receipts or trust receipts, are excluded from the calculation. If multiple share classes of common stock exist, they are combined to determine total shares outstanding. In cases where the common stock share classes act independently of each other (e.g., tracking stocks), each class is considered for inclusion separately. If multiple share classes exist, the pricing vehicle will be designated as the share class with the highest two-year trading volume as of the rank day in May.

Companies with a total market capitalization of less than \$30 million are not eligible for the RTY. Similarly, companies with only 5% or less of their shares available in the marketplace are not eligible for the RTY. Royalty trusts, limited liability companies, closed-end investment companies (companies that are required to report Acquired Fund Fees and Expenses, as defined by the SEC, including business development companies), blank check companies, special purpose acquisition companies, and limited partnerships are also ineligible for inclusion. Exchange traded funds and mutual funds are also excluded. Bulletin board, pink-sheets and over-the-counter (“OTC”) traded securities are not eligible for inclusion.

Annual reconstitution is a process by which the RTY is completely rebuilt. Based on closing levels of the company’s common stock on its primary exchange on the rank day of May of each year, FTSE Russell reconstitutes the composition of the RTY using the then existing market capitalizations of eligible companies. Reconstitution of the RTY occurs on the last Friday in June or, when the last Friday in June is the 29th or 30th, reconstitution occurs on the prior Friday. In addition, the index sponsor adds initial public offerings to the RTY on a quarterly basis based on total market capitalization ranking within the market-adjusted capitalization breaks established during the most recent reconstitution.

After membership is determined, a security’s shares are adjusted to include only those shares available to the public. This is often referred to as “free float.” The purpose of the adjustment is to exclude from market calculations the capitalization that is not available for purchase and is not part of the investable opportunity set.

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The iShares® Russell 2000 ETF

Information as of market close on March 18, 2019:

|                             |               |                                     |
|-----------------------------|---------------|-------------------------------------|
| Bloomberg Index Symbol: IWM | 52 Weeks Ago: | 156.28                              |
| Current Level:              | 155.75        | 52 Week High (on 8/31/2018): 173.02 |
|                             |               | 52 Week Low (on 12/24/2018): 125.88 |

The iShares® Russell 2000 ETF – Historical Closing Levels

January 1, 2014 to March 18, 2019

High Low Period End

2014

|                |        |        |        |
|----------------|--------|--------|--------|
| First Quarter  | 119.83 | 108.65 | 116.34 |
| Second Quarter | 118.81 | 108.88 | 118.81 |
| Third Quarter  | 120.02 | 109.35 | 109.35 |
| Fourth Quarter | 121.05 | 104.32 | 119.62 |

2015

|                |        |        |        |
|----------------|--------|--------|--------|
| First Quarter  | 125.99 | 114.83 | 124.37 |
| Second Quarter | 129.01 | 120.85 | 124.86 |
| Third Quarter  | 126.31 | 107.53 | 109.20 |
| Fourth Quarter | 119.89 | 109.01 | 112.62 |

2016

|                |        |        |        |
|----------------|--------|--------|--------|
| First Quarter  | 110.63 | 94.79  | 110.63 |
| Second Quarter | 118.43 | 108.68 | 114.98 |
| Third Quarter  | 125.70 | 113.69 | 124.21 |
| Fourth Quarter | 138.31 | 115.00 | 134.85 |

2017

|                |        |        |        |
|----------------|--------|--------|--------|
| First Quarter  | 140.36 | 133.75 | 137.48 |
| Second Quarter | 142.10 | 133.72 | 140.92 |
| Third Quarter  | 148.18 | 134.83 | 148.18 |
| Fourth Quarter | 154.30 | 145.63 | 152.46 |

2018

|                |        |        |        |
|----------------|--------|--------|--------|
| First Quarter  | 159.96 | 145.44 | 151.83 |
| Second Quarter | 169.97 | 148.13 | 163.77 |
| Third Quarter  | 173.02 | 164.20 | 168.55 |
| Fourth Quarter | 166.33 | 125.88 | 133.90 |

2019

|  |        |        |        |
|--|--------|--------|--------|
| First Quarter (through March 18, 2019) | 158.24 | 132.25 | 155.75 |
|--|--------|--------|--------|





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iShares<sup>®</sup> MSCI Brazil Capped ETF (the “EWZ”)

The iShares<sup>®</sup> MSCI Brazil ETF (the “EWZ”) is an investment portfolio maintained and managed by iShare~~Inc.~~ Inc. (“iShares”) and advised by BlackRock Fund Advisors (“BFA”). The shares of the EWZ are listed on the NYSE Arca under the symbol “EWZ.”

The MSCI Brazil 25/50 Index, which is the underlying index of EWZ, is calculated by or on behalf of MSCI Inc. (“MSCI”). MSCI does not issue, sponsor, endorse, sell or promote the EWZ. MSCI makes no representations or warranties to the owners of the securities or any member of the public regarding the advisability of investing in the securities. MSCI has no obligation or liability in connection with the operation, marketing or sale of the securities.

Investment Objective and Strategy

The EWZ seeks to provide investment results that correspond generally to the price and yield performance, before fees and expenses, of the MSCI Brazil 25/50 Index. The MSCI Brazil 25/50 Index was developed by MSCI as an equity benchmark for Brazilian stock performance, and is designed to measure equity market performance in Brazil. The EWZ uses a representative sampling strategy to try to track the MSCI Brazil 25/50 Index. The returns of the EWZ may be affected by certain management fees and other expenses, which are detailed in its prospectus.

Representative Sampling

The EWZ pursues a “representative sampling” strategy in attempting to track the performance of the MSCI Brazil 25/50 Index, and generally does not hold all of the equity securities included in the MSCI Brazil 25/50 Index. The EWZ invests in a representative sample of securities in the MSCI Brazil 25/50 Index, which have a similar investment profile as the MSCI Brazil 25/50 Index. Securities selected have aggregate investment characteristics (based on market capitalization and industry weightings), fundamental characteristics (such as return variability, earnings valuation and yield) and liquidity measures similar to those of the MSCI Brazil 25/50 Index. The EWZ will generally invest at least 95% of its assets in the securities of the MSCI Brazil 25/50 Index and in depositary receipts (“DRs”) representing securities of the MSCI Brazil 25/50 Index. The EWZ will at all times invest at least 80% of its assets in the securities of the MSCI Brazil 25/50 Index or in DRs representing securities of the MSCI Brazil 25/50 Index. The EWZ may invest the remainder of its assets in other securities, including securities not represented by the MSCI Brazil 25/50 Index, but which BFA believes will help the EWZ to track the MSCI Brazil 25/50 Index, and in other investments, including futures contracts, options on futures contracts, other types of options and swaps related to the MSCI Brazil 25/50 Index, as well as cash and cash equivalents, including shares of money market funds advised by BFA or its affiliates.

Industry Concentration Policy

The EWZ will concentrate its investments (i.e., hold 25% or more of its total assets) in a particular industry or group of industries only to approximately the same extent that the MSCI Brazil 25/50 Index is so concentrated. For purposes of this limitation, securities of the U.S. government (including its agencies and instrumentalities), repurchase agreements collateralized by U.S. government securities, and securities of state or municipal governments and their political subdivisions are not considered to be issued by members of any industry.

Description of the MSCI Brazil 25/50 Index and the MSCI Brazil Index

All information in this document regarding the MSCI Brazil 25/50 Index and the MSCI Brazil Index, including, without limitation, their make-up, method of calculation and changes in their components, is derived from publicly available information. Such information reflects the policies of, and is subject to change by, MSCI. Neither we nor any of our affiliates has undertaken any independent review or due diligence of such information. MSCI owns the copyright and all other rights to the MSCI Brazil 25/50 Index and the MSCI Brazil Index. MSCI has no obligation to continue to publish, and may discontinue publication of, the MSCI Brazil 25/50 Index or the MSCI Brazil Index.

The MSCI Brazil 25/50 Index

The MSCI Brazil 25/50 Index is published by MSCI and is intended to measure the performance of equity markets in Brazil. The index is a free float-adjusted market capitalization index with a base date of December 31, 1987. Component companies must meet objective criteria for inclusion in the MSCI Brazil 25/50 Index, taking into consideration unavailable strategic shareholdings and limitations to foreign ownership.

Objectives and Guiding Principles Underlying the MSCI 25/50 Indices

Under current regulations, a fund needs to satisfy certain tests, such as those relating to asset diversification and sources of income, for qualification as a “regulated investment company” or “RIC.” More specifically, one requirement of a RIC is that, at the end of each quarter of a RIC’s tax year, no more than 25% of the value of the RIC’s assets may be invested in a single issuer and the sum of the weights of all issuers representing more than 5% of the EFA should not exceed 50% of the EFA’s total assets. The MSCI 25/50 Indices take into account these investments limits, offering a benchmarking alternative for RIC compliant funds.

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The following principles have guided MSCI in designing a methodology for constructing the MSCI 25/50 Indices:

- the MSCI 25/50 Index is rebalanced periodically to reflect the 25% and 50% concentration constraints; and this rebalancing is achieved by using a process that aims to minimize the constituent weight differences between that MSCI 25/50 Index and the relevant parent index. The active risk or the tracking error of an MSCI 25/50 Index versus the relevant parent index is measured as the distance between the constituent weights of that MSCI 25/50 Index and the relevant parent index.

#### Constructing and Rebalancing the MSCI 25/50 Indices

The MSCI 25/50 Index methodology follows a portfolio optimization framework. The Barra Optimizer is utilized to perform the optimization function, which is aimed at minimizing index turnover, tracking error and extreme deviation from the relevant parent index. The Barra Optimizer is an algorithm designed to facilitate the portfolio construction process.

The minimum weight of any MSCI 25/50 Index constituent is equal to the weight of the smallest constituent in the relevant parent index. A buffer of 10% of the value of each constituent is used in order to reduce the risk of non-compliance due to short term market movements between two quarterly rebalancing. As a result, at the point of constructing or rebalancing the MSCI 25/50 Indices, the weight of any single issuer cannot exceed 22.5% of the index weight and all issuers with weight above 4.5% cannot exceed 45% of the index weight.

#### The MSCI Brazil Index

The MSCI Brazil Index is designed to measure the performance of the large and mid-cap segments of the Brazilian market.

Each of the MSCI Brazil 25/50 Index and the MSCI Brazil Index is part of the MSCI Equity Indices series. MSCI aims to include in its indices 85% of the free float-adjusted market capitalization in each industry sector, within each country included in an index.

#### Constructing the MSCI Indices

MSCI undertakes an index construction process, which involves: (i) defining the equity universe; (ii) determining the market investable equity universe for each market; (iii) determining market capitalization size segments for each market; (iv) applying index continuity rules for that index; (v) creating style segments within each size segment within each market; and (vi) classifying securities under the global industry classification standard.

#### Maintenance of and changes to the MSCI Indices

MSCI maintains the MSCI Indices with the objective of reflecting, on a timely basis, the evolution of the underlying equity markets and segments. In maintaining the MSCI Indices, emphasis is also placed on continuity, continuous investability of constituents, replicability, index stability and minimizing turnover in the indices.

As part of the changes to MSCI's methodology which became effective in May 2008, maintenance of the indices falls into three broad categories:

- semi-annual reviews, which occur each May and November and involve a comprehensive reevaluation of the market, the universe of eligible securities and other factors involved in composing the indices;

- quarterly reviews, which occur each February and August and focus on significant changes in the market since the last semi-annual review; and

- ongoing event-related changes, which generally are reflected in the indices at the time of the event and include changes resulting from mergers, acquisitions, spin-offs, bankruptcies, reorganizations, issuances and other extraordinary transactions, corporate actions and events.

Based on these reviews, additional components may be added, and current components may be removed, at any time. MSCI generally announces all changes resulting from semi-annual reviews, quarterly reviews and ongoing events in advance of their implementation, although in exceptional cases they may be announced during market hours for same or next day implementation.

#### Prices and exchange rates

Prices

The prices used to calculate the MSCI Indices are the official exchange closing prices or those figures accepted as such. MSCI reserves the right to use an alternative pricing source on any given day.

Exchange rates

MSCI uses the foreign exchange rates published by WM/Reuters at 4:00 p.m., London time. MSCI uses WM/Reuters rates for all developed and emerging markets.

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In case WM/Reuters does not provide rates for specific markets on given days (for example Christmas Day and New Year's Day), the previous business day's rates are normally used.

MSCI continues to monitor exchange rates independently and may, under exceptional circumstances, elect to use an alternative exchange rate if the WM/Reuters rates are not available, or if MSCI determines that the WM/Reuters rates are not reflective of market circumstances for a given currency on a particular day. In such circumstances, an announcement would be sent to clients with the related information. If appropriate, MSCI may conduct a consultation with the investment community to gather feedback on the most relevant exchange rate.

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iShares® MSCI Brazil Capped ETF

Information as of market close on March 18, 2019:

|   |         |
|---|---------|
| Bloomberg Index Symbol: EWZ 52 Weeks Ago: | 44.20   |
| Current Level:                            | 44.4052 |
| Week High (on 2/4/2019):                  | 45.46   |
| 52 Week Low (on 9/13/2018):               | 30.72   |

iShares® MSCI Brazil Capped ETF – Historical Closing Levels

January 1, 2014 to March 18, 2019

|                | High  | Low   | Period End |
|----------------|-------|-------|------------|
| 2014           |       |       |            |
| First Quarter  | 45.04 | 38.03 | 45.04      |
| Second Quarter | 49.98 | 45.15 | 47.78      |
| Third Quarter  | 54.00 | 43.45 | 43.45      |
| Fourth Quarter | 47.32 | 33.82 | 36.57      |
| 2015           |       |       |            |
| First Quarter  | 37.91 | 29.31 | 31.37      |
| Second Quarter | 37.19 | 32.25 | 32.77      |
| Third Quarter  | 32.98 | 20.64 | 21.95      |
| Fourth Quarter | 25.48 | 20.68 | 20.68      |
| 2016           |       |       |            |
| First Quarter  | 26.93 | 17.33 | 26.30      |
| Second Quarter | 30.18 | 24.96 | 30.18      |
| Third Quarter  | 35.10 | 29.03 | 33.73      |
| Fourth Quarter | 38.19 | 31.11 | 33.34      |
| 2017           |       |       |            |
| First Quarter  | 40.15 | 34.46 | 37.46      |
| Second Quarter | 40.44 | 32.75 | 34.14      |
| Third Quarter  | 43.35 | 33.88 | 41.69      |
| Fourth Quarter | 43.34 | 37.74 | 40.45      |
| 2018           |       |       |            |
| First Quarter  | 47.33 | 41.68 | 44.88      |
| Second Quarter | 44.17 | 31.00 | 32.05      |
| Third Quarter  | 37.55 | 30.72 | 33.73      |
| Fourth Quarter | 41.61 | 33.71 | 38.20      |
| 2019           |       |       |            |

First Quarter (through March 18, 2019) 45.46 40.64 44.40

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Additional Information About the Securities

Please read this information in conjunction with the summary terms on the front cover of this document.

Additional Provisions:

**Adjustment factor:** For each underlying, 1.0, subject to adjustment. If the applicable underlying shares are subject to a stock split or reverse stock split, then once such split has become effective, the adjustment factor will be adjusted to equal the product of the prior adjustment factor and the number of shares issued in such stock split or reverse stock split with respect to one underlying share. No such adjustment to the adjustment factor will be required unless such adjustment would require a change of at least 0.1% in the amount being adjusted as then in effect. Any number so adjusted will be rounded to the nearest one hundred-thousandth with five one-millionths being rounded upward.

**Closing price of the underlying shares:** The closing price for each underlying share (or one unit of any other security for which a closing price must be determined) on any trading day means:

- if the underlying shares (or any such other security) are listed or admitted to trading on a national securities exchange, the last reported sale price, regular way, of the principal trading session on such day on the principal U.S. securities exchange registered under the Exchange Act on which the underlying shares (or any such other security) are listed or admitted to trading, or
- if the underlying shares (or any such other security) are not listed or admitted to trading on any national securities exchange but are included in the OTC Bulletin Board Service (the “OTC Bulletin Board”) operated by the Financial Industry Regulatory Authority (“FINRA”), the last reported sale price of the principal trading session on the OTC Bulletin Board on such day.

If the underlying shares (or any such other security) are listed or admitted to trading on any national securities exchange but the last reported sale price, as applicable, is not available pursuant to the preceding sentence, then the closing price for one underlying share (or one unit of any such other security) on any trading day will mean the last reported sale price of the principal trading session on the over-the-counter market or the OTC Bulletin Board on such day.

If the last reported sale price for the underlying shares (or any such other security) is not available pursuant to either of the two preceding sentences, then the closing price for any trading day will be the mean, as determined by the calculation agent, of the firm bid prices for the underlying shares (or any such other security) obtained from as many recognized dealers in such security, but not exceeding three, as will make such bid prices available to the calculation agent. Bids of the Issuer or any of its affiliates may be included in the calculation of such mean, but only to the extent that any such bid is the highest of the bids obtained. The term “OTC Bulletin Board” will include any successor service thereto, or, if applicable, the OTC Reporting Facility operated by FINRA.

**Record date:** The record date for each contingent payment date shall be one business day prior to the scheduled contingent payment date; provided, however, that any contingent quarterly payment payable at maturity or upon redemption will be payable to the person to whom the payment at maturity or early redemption payment, as the case may be, is payable.

**Postponement of determination dates:** In the calculation of the determination closing prices and the final share price, the calculation agent will take into account market disruption events and non-trading days as follows:

If any scheduled determination date is not a trading day or if there is a market disruption event on that date, the determination date shall be the next succeeding trading day on which there is no market disruption event; provided that if a market disruption event has occurred on each of the five consecutive trading days immediately succeeding the scheduled determination date, then (i) that fifth succeeding trading day will be deemed to be the relevant determination date notwithstanding the occurrence of a market disruption event on that date and (ii) with respect to any that fifth trading day

on which a market disruption event occurs, the calculation agent will determine the determination closing price or the final share price, as applicable, of the underlying shares on that fifth trading day based on the mean of the bid prices for the underlying shares for that date obtained from as many recognized dealers in that security, but not exceeding three, as will make such bid prices available to the calculation agent. Bids of RBCCM or any of its affiliates may be included in the calculation of the mean, but only to the extent that any such bid is the highest of the bids

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obtained. If no bid prices are provided from any third party dealers, the closing price or the final share price, as applicable, will be determined by the calculation agent in its sole and absolute discretion (acting in good faith) taking into account any information that it deems relevant.

A market disruption event that affects one underlying shall not impact the determination of the value of any other underlying that is not so affected.

If a scheduled determination date (other than the final determination date) is not a trading day or if a market disruption event occurs on that day so that such determination date is postponed and falls less than two business days prior to the scheduled payment date, the payment date will be postponed to the second business day following that determination date as postponed.

If the scheduled final determination date is not a trading day or if a market disruption event occurs on that day so that the final determination date is postponed and falls less than two business days prior to the scheduled maturity date, the maturity date will be postponed to the second business day following that final determination date as postponed.

A “trading day” for each underlying share means any day on which the exchange and each related exchange are scheduled to be open for their respective regular trading sessions.

The exchange for each underlying share means the primary organized exchange or quotation system for trading the underlying shares, any successor to such exchange or quotation system or any substitute exchange or quotation system to which trading in such shares has temporarily relocated (provided that the calculation agent has determined that there is comparable liquidity relative to such shares on such temporary substitute exchange or quotation system as on the original exchange).

A related exchange for each underlying share means each exchange or quotation system on which futures or options contracts relating to the underlying shares are traded, any successor to such exchange or quotation system or any substitute exchange or quotation system to which trading in the futures or options contracts relating to the underlying shares has temporarily relocated (provided that the calculation agent has determined that there is comparable liquidity relative to the futures or options contracts relating to the underlying shares on that temporary substitute exchange or quotation system as on the original related exchange).

A market disruption event, as determined by the calculation agent in its sole discretion, means the occurrence or existence of any of the following events, as to any underlying share:

- a suspension, absence or material limitation of trading in the underlying shares on their primary market for more than two hours of trading or during the one-half hour before the close of trading in that market;
- a suspension, absence or material limitation of trading in option or futures contracts relating to the underlying shares, if available, in the primary market for those contracts for more than two hours of trading or during the one-half hour before the close of trading in that market;
- the underlying shares do not trade on the NYSE (including NYSE Arca), the Nasdaq or what was the primary market for the underlying shares; or
- any other event, if the calculation agent determines that the event materially interferes with our ability or the ability of any of our affiliates or hedge counterparties to unwind all or a material portion of a hedge with respect to the securities that such party or its respective hedge counterparties have effected or may effect as described below under “Use of Proceeds and Hedging.”

The following events will not be market disruption events:

- a limitation on the hours or number of days of trading in the underlying shares on their primary market, but only if the limitation results from an announced change in the regular business hours of the relevant market; and
- a decision to permanently discontinue trading in the option or futures contracts relating to the underlying shares.

For this purpose, a “suspension, absence or material limitation of trading” in the primary securities market on which option or futures contracts relating to the underlying shares, if available, are traded will not include any time when that market is itself closed for trading under ordinary circumstances.

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In contrast, a suspension or limitation of trading in option or futures contracts relating to the underlying shares, if available, in the primary market for those contracts, by reason of any of:

- a price change exceeding limits set by that market;
- an imbalance of orders relating to those contracts; or
- a disparity in bid and ask quotes relating to those contracts;

will constitute a suspension or material limitation of trading in option or futures contracts, as the case may be, relating to the underlying shares in the primary market for those contracts.

If an underlying's sponsor discontinues operation of the applicable underlying and that sponsor or another entity establishes or designates a successor or substitute fund that the calculation agent determines, in its sole discretion, to be comparable to the underlying (the successor fund), then the calculation agent will substitute the successor fund for the underlying and determine the closing price of the underlying shares on the valuation date as described above under "—Closing price of the underlying shares."

If the underlying's sponsor discontinues operation of the underlying and:

- the calculation agent does not select a successor fund, or
  - the successor fund is no longer traded or listed on any of the relevant trading days,
- the calculation agent will compute a substitute price for the underlying shares in accordance with the procedures last used to calculate the price of the underlying shares before any discontinuation but using only those securities that were held by the applicable underlying prior to such discontinuation.

If a successor fund is selected or the calculation agent calculates a price as a substitute for the underlying shares as described below, the successor fund or price will be used as a substitute for the underlying shares for all purposes going forward, including for purposes of determining whether a market disruption event exists, even if the underlying's sponsor elects to re-establish the underlying, unless the calculation agent in its sole discretion decides to use the re-established underlying.

Discontinuation  
of an  
underlying:

If the underlying's sponsor discontinues operation of the underlying before the valuation date and the calculation agent determines that no successor fund is available at that time, then on each trading day until the earlier to occur of:

- the determination of the final share price, or
- a determination by the calculation agent that a successor fund is available,

the calculation agent will determine the price that would be used in computing the closing price of the underlying shares as described in the preceding paragraph as if that day were a trading day. The calculation agent will cause notice of each price to be published not less often than once each month in *The Wall Street Journal*, another newspaper of general circulation or a website or webpage available to holders of the securities, and arrange for information with respect to these prices to be made available by telephone.

Notwithstanding these alternative arrangements, discontinuation of the operation of the underlying would be expected to adversely affect the value of, liquidity of and trading in the securities.

In addition, the calculation agent will have discretion to adjust the closing price of an underlying share or its Adjustment Factor if certain events occur. Exchange traded funds are registered investment companies that are eligible for trading on the exchanges on which they are listed.

Generally, exchange traded funds (other than commodities-based exchange traded funds) are subject to regulation under the Investment Company Act of 1940 and are restricted in their activities and have dividend requirements. In the event that any event occurs with respect to an underlying, the calculation agent shall determine whether and to what extent an adjustment should be made to the price of the underlying share, its Adjustment Factor, or any other term. The calculation agent shall have no obligation to make an adjustment for any such event.

Alternate  
exchange  
calculation in  
the case  
of an event of  
default:

In case an event of default with respect to the securities shall have occurred and be continuing, the amount of cash declared due and payable per security upon any acceleration of the securities (the "Acceleration Amount") shall be determined by the calculation agent and will be an amount of cash equal to the payment at maturity calculated as if the date of acceleration were the final determination date; provided that the unpaid portion of the contingent quarterly payment, if any, will be calculated on a 30/360 basis.

If the maturity of the securities is accelerated because of an event of default as described above, we will, or will cause the calculation agent to, provide written notice to the trustee at its New York office,

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on which notice the trustee may conclusively rely, and to DTC of the Acceleration Amount due with respect to the securities as promptly as possible and in no event later than two business days after the date of acceleration.

Listing: The securities will not be listed on any securities exchange.

Minimum ticketing size: \$10 / 100 securities

Trustee: The Bank of New York Mellon

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

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





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exemption to any relevant tax authority; or

(vi) who is subject to deduction or withholding on account of any tax, assessment, or other governmental charge that is imposed or withheld by reason of the application of Section 1471 through 1474 of the United States Internal Revenue Code of 1986, as amended (the “Code”) (or any successor provisions), any regulation, pronouncement, or agreement thereunder, official interpretations thereof, or any law implementing an intergovernmental approach thereto, whether currently in effect or as published and amended from time to time.

For the purposes of clause (iv) above, if a security is presented for payment more than 30 days after the relevant date, we shall only be required to pay such Additional Amounts as shall have accrued as of such 30th day, and no further Additional Amounts shall accrue or become payable after such date. For the avoidance of doubt, we will not have any obligation to pay any holders Additional Amounts on any tax which is payable otherwise than by deduction or withholding from payments made under or in respect of the securities.

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

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

U.S. tax considerations: The following is a general description of the material U.S. tax considerations relating to the securities. It does not purport to be a complete analysis of all tax considerations relating to the securities.

Prospective purchasers of the securities should consult their tax advisors as to the consequences under the tax laws of the country of which they are resident for tax purposes and the tax laws of the U.S. of acquiring, holding and disposing of the securities and receiving payments under the securities. This summary is based upon the law as in effect on the date of this document and is subject to any change in law that may take effect after such date.

The following section supplements the discussion of U.S. federal income taxation in the accompanying prospectus and prospectus supplement. It applies only to those holders who are not excluded from the discussion of U.S. federal income taxation in the accompanying prospectus. It does not apply to holders subject to special rules including accrual method taxpayers subject to special tax accounting rules under Section 451(b) of the Code. This discussion applies only to U.S. holders and non-U.S. holders that will purchase the securities upon original issuance and will hold the securities as capital assets for U.S. federal income tax purposes. In addition, the discussion below assumes that an investor in the securities will be subject to a significant risk that it will lose a significant amount of its investment in the securities.

You should consult your tax advisor concerning the U.S. federal income tax and other tax consequences of your investment in the securities in your particular circumstances, including the application of state, local or other tax laws and the possible effects of changes in federal or other tax laws.

NO STATUTORY, JUDICIAL OR ADMINISTRATIVE AUTHORITY DIRECTLY DISCUSSES HOW THE SECURITIES SHOULD BE TREATED FOR U.S. FEDERAL INCOME TAX PURPOSES. AS A RESULT, THE U.S. FEDERAL INCOME TAX CONSEQUENCES OF AN INVESTMENT IN THE SECURITIES ARE UNCERTAIN. BECAUSE OF THE UNCERTAINTY, YOU SHOULD CONSULT

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**YOUR TAX ADVISOR IN DETERMINING THE U.S. FEDERAL INCOME TAX AND OTHER TAX CONSEQUENCES OF YOUR INVESTMENT IN THE SECURITIES, INCLUDING THE APPLICATION OF STATE, LOCAL OR OTHER TAX LAWS AND THE POSSIBLE EFFECTS OF CHANGES IN FEDERAL OR OTHER TAX LAWS.**

We will not attempt to ascertain whether any underlying or any of the entities whose stock is included in that underlying would be treated as a “passive foreign investment company” within the meaning of Section 1297 of the Code, or a “U.S. real property holding corporation,” within the meaning of Section 897 of the Code. If any underlying or any of the entities whose stock is included in that underlying were so treated, certain adverse U.S. federal income tax consequences could possibly apply to U.S. and non-U.S. holders, respectively. You should refer to any available information filed with the SEC and other authorities by any underlying or the entities whose stock is included in that underlying and consult your tax advisor regarding the possible consequences to you in this regard.

In the opinion of our counsel, Morrison & Foerster LLP, it would generally be reasonable to treat a security with terms described in this document as a callable pre-paid cash-settled contingent income-bearing derivative contract linked to the underlyings for U.S. federal income tax purposes, and the terms of the securities require a holder and us (in the absence of a change in law or an administrative or judicial ruling to the contrary) to treat the securities for all tax purposes in accordance with such characterization. Although the U.S. federal income tax treatment of the contingent quarterly payment is uncertain, we intend to take the position, and the following discussion assumes, that such contingent quarterly payment (including any contingent quarterly payment paid on or with respect to the call or maturity date) constitutes taxable ordinary income to a U.S. holder at the time received or accrued in accordance with the holder’s regular method of tax accounting. If the securities are so treated, a U.S. holder should generally recognize capital gain or loss upon the call, sale or maturity of the securities in an amount equal to the difference between the cash amount a holder receives at such time (other than amounts properly attributable to any contingent quarterly payment, which would be taxed, as described above, as ordinary income) and the holder’s tax basis in the securities. In general, a U.S. holder’s tax basis in the securities will be equal to the price the holder paid for the securities.

Capital gain recognized by an individual U.S. holder is generally taxed at ordinary income rates where the property is held for one year or less. The ordinary income treatment of the contingent quarterly payments, in conjunction with the capital loss treatment of any loss recognized upon the sale, exchange or maturity of the securities, could result in adverse tax consequences to a holder because the deductibility of capital losses is subject to limitations.

**Alternative Treatments.** Alternative tax treatments of the securities are also possible and the IRS might assert that a treatment other than that described above is more appropriate. For example, it is possible to treat the securities, and the IRS might assert that the securities should be treated, as a single debt instrument. Pursuant to such characterization, the securities would generally be subject to the rules concerning short-term debt instruments as described under the heading “Tax Consequences—United States Taxation—Original Issue Discount—Short-Term Debt Securities” in the accompanying prospectus.

Because of the absence of authority regarding the appropriate tax characterization of the securities, it is also possible that the IRS could seek to characterize the securities in a manner that results in other tax consequences that are different from those described above. For example, the IRS could possibly assert that any gain or loss that a holder may recognize upon the call, sale or maturity of the securities should be treated as ordinary gain or loss.

The IRS has released a notice that may affect the taxation of holders of the securities. According to the notice, the IRS and the U.S. Treasury Department are actively considering whether the holder of an instrument such as the securities should be required to accrue ordinary income on a current basis irrespective of any contingent quarterly payments. It is not possible to determine what guidance they will ultimately issue, if any. It is possible, however, that under such guidance, holders of the securities will ultimately be required to accrue income currently irrespective of any contingent quarterly payments and this could be applied on a retroactive basis. The IRS and the U.S. Treasury Department are also considering other relevant issues, including whether additional gain or loss from such instruments should be treated as ordinary or capital and whether the special “constructive ownership rules” of Section 1260 of the Code, which very generally can operate to recharacterize certain long-term capital gains as ordinary

income and impose an interest charge, might be applied to such instruments. Holders are urged to consult their tax advisors concerning the significance,

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and the potential impact, of the above considerations. We intend to treat the securities for U.S. federal income tax purposes in accordance with the treatment described in this document unless and until such time as the U.S. Treasury Department and IRS determine that some other treatment is more appropriate.

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

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

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

While the U.S. federal income tax treatment of the securities (including proper characterization of the contingent quarterly payments for U.S. federal income tax purposes) is uncertain, U.S. federal income tax at a 30% rate (or at a lower rate under an applicable income tax treaty) will be withheld in respect of the contingent quarterly payments paid to a non-U.S. holder unless such payments are effectively connected with the conduct by the non-U.S. holder of a trade or business in the U.S. (in which case, to avoid withholding, the non-U.S. holder will be required to provide a Form W-8ECI). We will not pay any additional amounts in respect of such withholding. To claim benefits under an income tax treaty, a non-U.S. holder must obtain a taxpayer identification number and certify as to its eligibility under the appropriate treaty's limitations on benefits article, if applicable (which certification may generally be made on a Form W-8BEN or W-8BEN-E, or a substitute or successor form). In addition, special rules may apply to claims for treaty benefits made by corporate non-U.S. holders. A non-U.S. holder that is eligible for a reduced rate of U.S. federal withholding tax pursuant to an income tax treaty may obtain a refund of any excess amounts withheld by filing an appropriate claim for refund with the IRS. The availability of a lower rate of withholding or an exemption from withholding under an applicable income tax treaty will depend on the proper characterization of the contingent quarterly payments under U.S. federal income tax laws and whether such treaty rate or exemption applies to such contingent quarterly payments. No assurance can be provided on the proper characterization of the contingent quarterly payments for U.S. federal income tax purposes and, accordingly, no assurance can be provided on the availability of benefits under any income tax treaty. Non-U.S. holders should consult their tax advisors in this regard. Except as discussed below, a non-U.S. holder will generally not be subject to U.S. federal income or withholding tax on any gain (not including, for the avoidance of doubt, any amounts properly attributable to any contingent quarterly payment, which would be subject to the rules discussed in the previous paragraph) upon the call, sale or maturity of the securities, provided that (i) the holder complies with any applicable certification requirements (which certification may generally be made on a Form W-8BEN or W-8BEN-E, or a substitute or successor form), (ii) the payment is not effectively connected with the conduct by the holder of a U.S. trade or business, and (iii) if the holder is a non-resident alien individual, such holder is not present in the U.S. for 183 days or more during the taxable year of the call, sale or maturity of the securities. In the case of (ii) above, the holder generally would be subject to U.S. federal income tax with respect to any income or gain in the same manner as if the holder were a U.S. holder and, in the case of a holder that is a corporation, the holder may also be subject to a branch profits tax equal to 30% (or such lower rate provided by an applicable U.S. income tax treaty) of a portion of its earnings and profits for the taxable year that are effectively connected with its conduct of a trade or business in the U.S., subject to certain adjustments. Payments made to a non-U.S. holder may be subject to information reporting and to backup withholding unless the holder complies with applicable certification and identification requirements as to its foreign status.

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.

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federal income tax purposes if a payment with respect to such interest could give rise to a U.S. source dividend. However, the Internal Revenue Service (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 securities are not delta-one instruments, non-U.S. holders should not be subject to withholding on dividend equivalent payments, if any, under the securities. However, it is possible that the securities could be treated as deemed reissued for U.S. federal income tax purposes upon the occurrence of certain events affecting the underlying stock or the securities, and following such occurrence the securities could be treated as subject to withholding on dividend equivalent payments. Non-U.S. holders that enter, or have entered, into other transactions in respect of the underlying stock or the securities should consult their tax advisors as to the application of the dividend equivalent withholding tax in the context of the securities and their other transactions. If any payments are treated as dividend equivalents subject to withholding, we (or the applicable withholding agent) would be entitled to withhold taxes without being required to pay any additional amounts with respect to amounts so withheld.

As discussed above, alternative characterizations of the securities for U.S. federal income tax purposes are possible. Should an alternative characterization, by reason of change or clarification of the law, by regulation or otherwise, cause payments as to the securities to become subject to withholding tax in addition to the withholding tax described above, we will withhold tax at the applicable statutory rate. The IRS has also indicated that it is considering whether income in respect of instruments such as the securities should be subject to withholding tax. Prospective investors should consult their own tax advisors in this regard.

Foreign Account Tax Compliance Act. The Foreign Account Tax Compliance Act (“FATCA”), enacted on March 18, 2010, imposes a 30% U.S. withholding tax on certain U.S. source payments of interest (and original issue discount), dividends, or other fixed or determinable annual or periodical gain, profits, and income, and on the gross proceeds from a disposition of property (including payments at maturity, or upon a redemption or sale) of a type which can produce U.S. source interest or dividends (“withholdable payments”), if paid to a foreign financial institution (including amounts paid to a foreign financial institution on your behalf) unless such institution enters into an agreement with the U.S. Treasury Department to collect and provide to the U.S. Treasury Department certain information regarding U.S. account holders, including certain account holders that are foreign entities with U.S. owners, with such institution or otherwise complies with FATCA. In addition, the securities may constitute a “financial account” for these purposes and thus, be subject to information reporting requirements pursuant to FATCA. The legislation also generally imposes a withholding tax of 30% on withholdable payments made to a non-financial foreign entity, unless that entity provides the withholding agent with a certification that it does not have any substantial U.S. owners or a certification identifying the direct and indirect substantial U.S. owners of the entity.

The U.S. Treasury Department and the IRS have announced that withholding on payments of gross proceeds from a sale, exchange or redemption of the securities will only apply to payments made after December 31, 2018. However, recently proposed regulations eliminate the requirement of withholding on gross proceeds from the sale or disposition of financial instruments. The U.S. Treasury Department has indicated that taxpayers may rely on these proposed regulations pending their finalization. We will not pay additional amounts with respect to any FATCA withholding. Therefore, if such withholding applies, any payments on the securities will be significantly less than what you would have otherwise received. Depending on your circumstances, these amounts withheld may be creditable or refundable to you. Foreign financial institutions and non-financial foreign entities located in jurisdictions that have

an intergovernmental agreement with the United States governing FATCA may be subject to different rules. You are urged to consult with your own tax advisor regarding the possible implications of FATCA on your investment in the securities.

Use of proceeds and hedging: The net proceeds from the sale of the securities will be used as described under “Use of Proceeds” in the accompanying prospectus supplement and prospectus and to hedge market risks of Royal Bank of Canada associated with its obligation to make the payments on the securities. The initial public offering price of the securities includes the underwriting discount and commission and the estimated cost of hedging our obligations under the securities.

Supplemental Under the terms of a distribution agreement, RBCCM, an affiliate of Royal Bank of Canada, will



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information regarding plan of distribution; conflicts of interest: purchase the securities from Royal Bank of Canada for distribution to MSWM. RBCCM will act as agent for the securities and will receive a fee of \$0.20 per \$10 stated principal amount and will pay to MSWM a fixed sales commission of \$0.15 for each of the securities they sell. Of the amount per \$10 stated principal amount received by RBCCM, RBCCM will pay MSWM a structuring fee of \$0.05 for each security.

MSWM may reclaim selling concessions allowed to individual brokers within MSWM in connection with the offering if, within 30 days of the offering, Royal Bank of Canada repurchases the securities distributed by those brokers.

We expect that delivery of the securities will be made against payment for the securities on or about March 27, 2019, which is the third business day following the pricing date (this settlement cycle being referred to as “T+3”). Under Rule 15c6-1 of the Exchange Act, 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 the securities more than two business days prior to the original issue date will be required to specify alternative settlement arrangements to prevent a failed settlement.

In addition, RBCCM or another of its affiliates or agents may use this document in market-making transactions after the initial sale of the securities, but is under no obligation to do so and may discontinue any market-making activities at any time without notice.

The value of the securities shown on your account statement may be based on RBCCM’s estimate of the value of the securities if RBCCM or another of our affiliates were to make a market in the securities (which it is not obligated to do). That estimate will be based on the price that RBCCM may pay for the securities in light of then prevailing market conditions, our creditworthiness and transaction costs. For an initial period of approximately 12 months, the value of the securities that may be shown on your account statement is expected to be higher than RBCCM’s estimated value of the securities at that time. This is because the estimated value of the securities will not include the agent’s commission and our hedging costs and profits; however, the value of the securities shown on your account statement during that period is initially expected to be a higher amount, reflecting the addition of the agent’s commission and our estimated costs and profits from hedging the securities. This excess is expected to decrease over time until the end of this period, and we reserve the right to shorten this period. After this period, if RBCCM repurchases your securities, it expects to do so at prices that reflect its estimated value.

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

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

retail investor in the EEA may be unlawful under the PRIIPs Regulation.

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.

Structuring  
the  
securities:

The securities are our debt securities, the return on which is linked to the performance of the underlying shares. As is the case for all of our debt securities, including our structured notes, the economic terms of the securities reflect our actual or perceived creditworthiness at the time of pricing. In addition, because structured notes result in increased operational, funding and liability

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management costs to us, we typically borrow the funds under these securities at a rate that is more favorable to us than the rate that we might pay for a conventional fixed or floating rate debt security of comparable maturity. Using this relatively lower implied borrowing rate, rather than the secondary market rate, along with the fees and expenses associated with structured notes, typically reduces the initial estimated value of the securities at the time their terms are set. Unlike the estimated value that will be included in the final pricing supplement, any value of the securities determined for purposes of a secondary market transaction may be based on a different funding rate, which may result in a lower value for the securities than if our initial internal funding rate were used.

In order to satisfy our payment obligations under the securities, we may choose to enter into certain hedging arrangements (which may include call options, put options or other derivatives) on the issue date with RBCCM 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, the volatility of the underlying shares, and the tenor of the securities. The economic terms of the securities and their initial estimated value depend in part on the terms of these hedging arrangements.

The lower implied borrowing rate, the underwriting commission and the hedging-related costs relating to the securities reduce the economic terms of the securities to you and result in the initial estimated value for the securities on the pricing date being less than their public offering price. See “Risk Factors—The initial estimated value of the securities will be less than the price to the public” above.

Contact: MSWM clients may contact their local Morgan Stanley branch office or our principal executive offices at 1585 Broadway, New York, New York 10036 (telephone number 1-(866)-477-4776). All other clients may contact their local brokerage representative. Third-party distributors may contact Morgan Stanley Structured Investment Sales at 1-(800)-233-1087.

Where you can find more information: Royal Bank of Canada has filed a registration statement (including a prospectus) with the SEC for the offering to which this communication relates. Before you invest, you should read the prospectus in that registration statement and other documents the issuer has filed with the SEC for more complete information about the issuer and this offering. You may get these documents for free by visiting EDGAR on the SEC website at [www.sec.gov](http://www.sec.gov). Alternatively, the issuer, any underwriter or any dealer participating in this offering will arrange to send you the prospectus if you request it by calling toll-free 1-877-688-2301.

You should read this document together with the prospectus dated September 7, 2018, as supplemented by the prospectus supplement dated September 7, 2018 relating to our Senior Global Medium-Term Notes, Series H, of which these securities are a part. Capitalized terms used but not defined in this document will have the meanings given to them in the prospectus supplement. In the event of any conflict, this document will control. The securities vary from the terms described in the prospectus supplement in several important ways. You should read this document carefully.

This document, together with the documents listed below, contains the terms of the securities and supersedes all prior or contemporaneous oral statements as well as any other written materials including preliminary or indicative pricing terms, correspondence, trade ideas, structures for implementation, sample structures, brochures or other educational materials of ours. You should carefully consider, among other things, the matters set forth in “Risk Factors” in the prospectus supplement dated September 7, 2018 and in this document, as the securities involve risks not associated with conventional debt securities. We urge you to consult your investment, legal, tax, accounting and other advisors before you invest in the securities.

You may access these documents on the SEC website at [www.sec.gov](http://www.sec.gov) as follows (or if such address has changed, by reviewing our filings for the relevant date on the SEC website):

Prospectus dated September 7, 2018:

<https://www.sec.gov/Archives/edgar/data/1000275/000121465918005973/196181424b3.htm>

Edgar Filing: ROYAL BANK OF CANADA - Form FWP

Prospectus Supplement dated September 7, 2018:

<https://www.sec.gov/Archives/edgar/data/1000275/000121465918005975/f97180424b3.htm>

Our Central Index Key, or CIK, on the SEC website is 1000275.

Please see the section “Documents Incorporated by Reference” on page i of the above prospectus

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Based on the Worst Performing of the SPDR® S&P 500® ETF Trust, the iShares® Russell 2000 ETF and the iShares® MSCI Brazil ETF

for a description of our filings with the SEC that are incorporated by reference therein.

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

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

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

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

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