

BANK OF MONTREAL /CAN/  
Form FWP  
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Subject to Completion, dated November 7, 2018

Pricing Supplement to the Prospectus dated April 27, 2017, the Prospectus Supplement dated September 23, 2018 and the Product Supplement dated May 1, 2017

### **Senior Medium-Term Notes, Series E**

#### **Bullish Digital Return Notes with Barrier due December 16, 2019**

#### **Linked to the Lesser Performing of the S&P 500<sup>®</sup> Index and the Russell 2000<sup>®</sup> Index**

The notes are designed for investors who seek a fixed positive return equal to the Digital Return (as defined below) if a Barrier Event (as defined below) does not occur as to either the S&P 500<sup>®</sup> Index or the Russell 2000<sup>®</sup> Index (each an “Underlying Asset”). Investors should be willing to forgo periodic interest, and if a Barrier Event occurs, be willing to lose 1% of their principal amount for each 1% that the level of the Lesser Performing Underlying Asset decreases. A “Barrier Event” will occur if the closing level of either Underlying Asset on any trading day from the Pricing Date to the Valuation Date is less than its Barrier Level (70% of its Initial Level).

Investors in the notes may lose up to 100% of their principal amount at maturity.

The Digital Return is expected to be 7.10%. Accordingly, the maximum amount payable on the notes is expected to be \$1,071.00 for each \$1,000 in principal amount. The actual Digital Return will be determined on the Pricing Date.

Any payment at maturity is subject to the credit risk of Bank of Montreal.

The notes do not bear interest.

The notes will not be listed on any securities exchange.

The notes will be issued in minimum denominations of \$1,000 and integral multiples of \$1,000.

The offering is expected to price on or about November 13, 2018, and the notes are expected to settle through the facilities of The Depository Trust Company on or about November 16, 2018.

The notes are scheduled to mature on or about December 16, 2019.

Our subsidiary, BMO Capital Markets Corp. (“BMOCM”), is the agent for this offering. See “Supplemental Plan of Distribution (Conflicts of Interest)” below.

The notes will not be subject to conversion into our common shares or the common shares of any of our affiliates under subsection 39.2(2.3) of the Canada Deposit Insurance Corporation Act (the “CDIC Act”).

*Investing in the notes involves risks, including those described in the “Selected Risk Considerations” section beginning on page P-5 of this pricing supplement, the “Additional Risk Factors Relating to the Notes” section beginning on page PS-5 of the product supplement, and the “Risk Factors” section beginning on page S-1 of the prospectus supplement and on page 8 of the prospectus.*

**Neither the Securities and Exchange Commission nor any state securities commission has approved or disapproved of these notes or passed upon the accuracy of this pricing supplement, the product supplement, the**

**prospectus supplement or the prospectus. Any representation to the contrary is a criminal offense.**

The notes will be our unsecured obligations and will not be savings accounts or deposits that are insured by the United States Federal Deposit Insurance Corporation, the Deposit Insurance Fund, the Canada Deposit Insurance Corporation or any other governmental agency or instrumentality or other entity.

On the date of this preliminary pricing supplement, based on the terms set forth above, the estimated initial value of the notes is \$959.39 per \$1,000 in principal amount. The estimated initial value of the notes on the Pricing Date may differ from this value but will not be less than \$945 per \$1,000 in principal amount. However, as discussed in more detail in this pricing supplement, the actual value of the notes at any time will reflect many factors and cannot be predicted with accuracy.

**Price to Public<sup>(1)</sup> Agent's Commission<sup>(1)</sup> Proceeds to Bank of Montreal**

Per Note US\$1,000	US\$19.30	US\$980.70
Total US\$	US\$	US\$

<sup>(1)</sup> Certain dealers who purchase the notes for sale to certain fee-based advisory accounts may forego some or all of their selling concessions, fees or commissions. The public offering price for investors purchasing the notes in these accounts may be between \$980.70 and \$1,000 per \$1,000 in principal amount.

**BMO CAPITAL MARKETS**

**Key Terms of the Notes:**

**Underlying Assets:** The S&P 500<sup>®</sup> Index (ticker symbol: SPX) and the Russell 2000<sup>®</sup> Index (ticker symbol: RTY). See the section below entitled “The Underlying Assets” for additional information about the Underlying Assets.

**Payment at Maturity:** (i) If a Barrier Event does not occur, then the amount that the investors will receive at maturity for each \$1,000 in principal amount of the notes will equal:

Principal Amount + (Principal Amount x Digital Return)

(ii) If a Barrier Event occurs, but the Final Level of the Lesser Performing Underlying Asset is greater than or equal to its Initial Level, then investors will receive the principal amount of the notes.

(iii) If a Barrier Event occurs, and the Percentage Change of either Underlying Asset is negative, then the payment at maturity will equal:

Principal Amount + (Principal Amount × Percentage Change of the Lesser Performing Underlying Asset)

*In this case, investors will lose all or a portion of the principal of the notes.*

**Digital Return:** 7.10%

**Initial Level:** The respective closing level of each of the Underlying Assets on the Pricing Date.

**Final Level:** The respective closing level of each of the Underlying Assets on the Valuation Date.

**Barrier Level:** 70% of the respective Initial Level for each of the Underlying Assets.

**Barrier Event:** A Barrier Event will be deemed to occur with respect to an Underlying Asset if its closing level is less than its Barrier Level on any trading day during the Monitoring Period.

**Monitoring Period:** The period from the Pricing Date to the Valuation Date.

**Lesser Performing Underlying Asset:** The Underlying Asset that has the lowest Percentage Change.

Percentage Change:  $\frac{\text{Final Level} - \text{Initial Level}}{\text{Initial Level}}$ , expressed as a percentage.

Pricing Date: On or about November 13, 2018.

Settlement Date: On or about November 16, 2018, as determined on the Pricing Date.

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Valuation Date: On or about December 11, 2019, as determined on the Pricing Date.

Maturity Date: On or about December 16, 2019, as determined on the Pricing Date.

Automatic Redemption: Not applicable

Calculation Agent: BMOCM

Selling Agent: BMOCM

CUSIP: 06367WEU3

The Pricing Date and the Settlement Date are subject to change. The actual Pricing Date, Settlement Date, Valuation Date, Maturity Date, Initial Levels and Barrier Levels will be set forth in the final pricing supplement.

### **Payoff Example**

The following tables show the hypothetical payout profile of an investment in the notes based on hypothetical Percentage Changes of the Lesser Performing Underlying Asset, reflecting the Barrier Level of 70% and a Digital Return of 7.10%. Please see the hypothetical returns section below for more detailed examples.

If a Barrier Event *does not* occur:

If a Barrier Event *does* occur:

**\* Your return on the notes will be determined solely by the Percentage Change of the Lesser Performing Underlying Asset**

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## **Additional Terms of the Notes**

You should read this pricing supplement together with the product supplement dated May 1, 2017, the prospectus supplement dated September 23, 2018 and the prospectus dated April 27, 2017. This pricing supplement, together with the documents listed below, contains the terms of the notes and supersedes all other prior or contemporaneous oral statements as well as any other written materials including preliminary or indicative pricing terms, correspondence, trade ideas, structures for implementation, sample structures, fact sheets, brochures or other educational materials of ours or the agent. You should carefully consider, among other things, the matters set forth in “Additional Risk Factors Relating to the Notes” in the product supplement, as the notes involve risks not associated with conventional debt securities. We urge you to consult your investment, legal, tax, accounting and other advisers before you invest in the notes.

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):

Product supplement dated May 1, 2017:

<https://www.sec.gov/Archives/edgar/data/927971/000121465917002863/p427170424b5.htm>

Prospectus supplement dated September 23, 2018:

<https://www.sec.gov/Archives/edgar/data/927971/000119312518280416/d624491d424b5.htm>

Prospectus dated April 27, 2017:

<https://www.sec.gov/Archives/edgar/data/927971/000119312517142728/d254784d424b2.htm>

Please note that references in the product supplement to the prospectus supplement will be deemed to refer to the prospectus supplement dated September 23, 2018.

Our Central Index Key, or CIK, on the SEC website is 927971. As used in this pricing supplement, “we,” “us” or “our” refers to Bank of Montreal.

We have filed a registration statement (including a prospectus) with the SEC for the offering to which this document relates. Before you invest, you should read the prospectus in that registration statement and the other documents that we have filed with the SEC for more complete information about us and this offering. You may obtain these documents free of charge by visiting the SEC’s website at <http://www.sec.gov>. Alternatively, we will arrange to send to you the prospectus (as supplemented by the prospectus supplement and product supplement) if you request it by

calling our agent toll-free at 1-877-369-5412.

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## Selected Risk Considerations

An investment in the notes involves significant risks. Investing in the notes is not equivalent to investing directly in the Underlying Assets. These risks are explained in more detail in the “Additional Risk Factors Relating to the Notes” section of the product supplement.

**Your investment in the notes may result in a loss.** — You may lose some or all of your investment in the notes. The payment at maturity will be based on the Final Level of each Underlying Asset, whether a Barrier Event has occurred, and whether the Final Level of the Lesser Performing Underlying Asset is less than its Initial Level. If a Barrier Event occurs during the Monitoring Period and the Final Level of either Underlying Asset is less than its Initial Level, you will lose 1% of the principal amount of your notes for each 1% that the Final Level of the Lesser Performing Underlying Asset is less than its Initial Level. **Accordingly, you could lose up to 100% of the principal amount of the notes.**

**The protection provided by the Barrier Level may terminate on any day during the Monitoring Period.** — If the closing level of either Underlying Asset on any trading day during the Monitoring Period is less than its Barrier Level, you will be fully exposed at maturity to any decrease in the value of the Lesser Performing Underlying Asset. Under these circumstances, if the Percentage Change of either Underlying Asset is negative, you will lose 1% (or a fraction thereof) of the principal amount of your investment for every 1% (or a fraction thereof) that the Percentage Change of the Lesser Performing Underlying Asset is less than its Initial Level. You will be subject to this potential loss of principal even if, after the Barrier Event, the value of the relevant Underlying Asset increases above its Barrier Level.

**Your return on the notes is limited to the Digital Return, regardless of any appreciation in the level of the Underlying Assets.** — The return on your notes will not be greater than the Digital Return. This will be the case even if the Percentage Change of the Lesser Performing Underlying Asset exceeds the Digital Return.

**Your investment is subject to the credit risk of Bank of Montreal.** — Our credit ratings and credit spreads may adversely affect the market value of the notes. Investors are dependent on our ability to pay the amount due at maturity, and therefore investors are subject to our credit risk and to changes in the market’s view of our creditworthiness. Any decline in our credit ratings or increase in the credit spreads charged by the market for taking our credit risk is likely to adversely affect the value of the notes.

**Your return on the notes may be determined solely by reference to the Lesser Performing Underlying Asset, even if the other Underlying Asset performs better.** — Your payment at maturity may only be determined by reference to the performance of the Lesser Performing Underlying Asset. Even if the other Underlying Asset has appreciated in value compared to its Initial Level, or has experienced a decline that is less than that of the Lesser Performing Underlying Asset, your return at maturity will only be determined by reference to the performance of the Lesser Performing Underlying Asset if a Barrier Event has occurred.

**Your return on the notes will be determined by reference to each Underlying Asset individually, not to a basket, and the payments on the notes will be based on the performance of the Lesser Performing Underlying Asset.** — The notes are not linked to a weighted basket, in which the risk may be mitigated and diversified among each of the basket components. For example, in the case of notes linked to a weighted basket, the return would depend on the weighted aggregate performance of the basket components reflected as the basket return. As a result, the depreciation of one basket component could be mitigated by the appreciation of the other basket component, as scaled by the weighting of that basket component. However, in the case of the notes, the individual performance of each Underlying Asset would not be combined, and the depreciation of an Underlying Asset would not be mitigated by any appreciation of the other Underlying Asset. Instead, your return at maturity will depend solely on the Final Level of the Lesser Performing Underlying Asset.

**Potential conflicts.** — We and our affiliates play a variety of roles in connection with the issuance of the notes, including acting as calculation agent. In performing these duties, the economic interests of the calculation agent and other affiliates of ours are potentially adverse to your interests as an investor in the notes. We or one or more of our affiliates may also engage in trading of securities represented by the Underlying Assets on a regular basis as part of our general broker-dealer and other businesses, for proprietary accounts, for other accounts under management or to facilitate transactions for our customers. Any of these activities could adversely affect the level of an Underlying Asset and, therefore, the market value of, and the payments on, the notes. We or one or more of our affiliates may also issue or underwrite other securities or financial or derivative instruments with returns linked or related to changes in the performance of the Underlying Assets. By introducing competing products into the marketplace in this manner, we or one or more of our affiliates could adversely affect the market value of the notes.

**Our initial estimated value of the notes will be lower than the price to public.** — Our initial estimated value of the notes is only an estimate, and is based on a number of factors. The price to public of the notes will exceed our initial estimated value, because costs associated with offering, structuring and hedging the notes are included in the price to public, but are not included in the estimated value. These costs include the underwriting discount and selling concessions, the profits that we and our affiliates expect to realize for assuming the risks in hedging our obligations under the notes and the estimated cost of hedging these obligations. The initial estimated value of the notes may be as low as the amount indicated on the cover page of this pricing supplement.

**Our initial estimated value does not represent any future value of the notes, and may also differ from the estimated value of any other party.** — Our initial estimated value of the notes as of the date of this preliminary pricing supplement is, and our estimated value as determined on the Pricing Date will be, derived using our internal pricing models. This value is based on market conditions and other relevant factors, which include volatility of the Underlying Assets, dividend rates and interest rates. Different pricing models and assumptions could provide values for the notes that are greater than or less than our initial estimated value. In addition, market conditions and other relevant factors after the Pricing Date are expected to change, possibly rapidly, and our assumptions may prove to be incorrect. After the Pricing Date, the value of the notes could change dramatically due to changes in market conditions, our creditworthiness, and the other factors set forth in this pricing supplement and the product supplement. These changes are likely to impact the price, if any, at which we or BMOCM would be willing to purchase the notes from you in any secondary market transactions. Our initial estimated value does not represent a minimum price at which we or our affiliates would be willing to buy your notes in any secondary market at any time.

**The terms of the notes are not determined by reference to the credit spreads for our conventional fixed-rate debt.** — To determine the terms of the notes, we will use an internal funding rate that represents a discount from the credit spreads for our conventional fixed-rate debt. As a result, the terms of the notes are less favorable to you than if we had used a higher funding rate.

**Certain costs are likely to adversely affect the value of the notes.** — Absent any changes in market conditions, any secondary market prices of the notes will likely be lower than the price to public. This is because any secondary market prices will likely take into account our then-current market credit spreads, and because any secondary market prices are likely to exclude all or a portion of the underwriting discount and selling concessions and the hedging profits and estimated hedging costs that are included in the price to public of the notes and that may be reflected on your account statements. In addition, any such price is also likely to reflect a discount to account for costs associated with establishing or unwinding any related hedge transaction, such as dealer discounts, mark-ups and other transaction costs. As a result, the price, if any, at which BMOCM or any other party may be willing to purchase the notes from you in secondary market transactions, if at all, will likely be lower than the price to public. Any sale that you make prior to the maturity date could result in a substantial loss to you.

**You will not have any shareholder rights and will have no right to receive any securities represented by the Underlying Assets at maturity.** — Investing in your notes will not make you a holder of any securities represented by the Underlying Assets. Neither you nor any other holder or owner of the notes will have any voting rights, any right to receive dividends or other distributions or any other rights with respect to these securities.

**An investment in the notes is subject to risks associated in investing in stocks with a small market capitalization.** — The RTY consists of stocks issued by companies with relatively small market capitalizations. These companies often have greater stock price volatility, lower trading volume and less liquidity than large-capitalization companies. As a result, the level of the RTY may be more volatile than that of a market measure that does not track solely small-capitalization stocks. Stock prices of small-capitalization companies are also generally 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, and be less attractive to many investors if they do not pay dividends. In addition, small capitalization companies are typically less well-established and less stable financially than large-capitalization companies and may depend on a small number of key personnel, making them more vulnerable to loss of those individuals. Small capitalization companies tend to have lower revenues, less diverse product lines, smaller shares of their target markets, fewer financial resources and fewer competitive strengths than large-capitalization companies. These companies may also be more susceptible to adverse developments related to their products or services.

**Changes that affect an Underlying Asset may adversely affect the market value of the notes and the amount you will receive at maturity.** — The policies of S&P Dow Jones Indices LLC (“S&P”), the sponsor of the SPX, and FTSE Russell, the sponsor of the RTY (each, an “Index Sponsor”), concerning the calculation of the applicable Underlying Asset, additions, deletions or substitutions of the components of the applicable Underlying Asset and the manner in which changes affecting those components, such as stock dividends, reorganizations or mergers, may be reflected in the applicable Underlying Asset and, therefore, could affect the level of the applicable Underlying Asset, the amount payable on the notes at maturity and the market value of the notes prior to maturity. The amount payable on the notes and their market value could also be affected if either Index Sponsor changes these policies, for example, by changing the manner in which it calculates the applicable Underlying Asset, or if either Index Sponsor discontinues or suspends the calculation or publication of the applicable Underlying Asset.

**We have no affiliation with either Index Sponsor and will not be responsible for any actions taken by either Index Sponsor.** — Neither Index Sponsor is an affiliate of ours or will be involved in the offering of the notes in any way. Consequently, we have no control over the actions of either Index Sponsor, including any actions of the type that would require the calculation agent to adjust the payments on the notes. Neither Index Sponsor has any obligation of any sort with respect to the notes. Thus, neither Index Sponsor has any obligation to take your interests into consideration for any reason, including in taking any actions that might affect the value of the notes. None of our proceeds from the issuance of the notes will be delivered to either Index Sponsor.

**Lack of liquidity.** — The notes will not be listed on any securities exchange. BMOCM may offer to purchase the notes in the secondary market, but is not required to do so. Even if there is a secondary market, it may not provide enough liquidity to allow you to trade or sell the notes easily. Because other dealers are not likely to make a secondary market for the notes, the price at which you may be able to trade the notes is likely to depend on the price, if any, at which BMOCM is willing to buy the notes.

**Hedging and trading activities.** — We or any of our affiliates may carry out hedging activities related to the notes, including purchasing or selling securities included in the Underlying Assets, or futures or options relating to the Underlying Assets, or other derivative instruments with returns linked or related to changes in the performance of the Underlying Assets. We or our affiliates may also engage in trading relating to the Underlying Assets from time to time. Any of these hedging or trading activities on or prior to the Pricing Date and during the term of the notes could adversely affect our payment to you at maturity.

**Many economic and market factors will influence the value of the notes.** — In addition to the levels of the Underlying Assets and interest rates on any trading day, the value of the notes will be affected by a number of economic and market factors that may either offset or magnify each other, and which are described in more detail in the product supplement.

**You must rely on your own evaluation of the merits of an investment linked to the Underlying Assets.** — In the ordinary course of their businesses, our affiliates from time to time may express views on expected movements in the level of the Underlying Assets or the prices of the securities included in the Underlying Assets. One or more of our affiliates have published, and in the future may publish, research reports that express views on the Underlying Assets or these securities. However, these views are subject to change from time to time. Moreover, other professionals who deal in the markets relating to the Underlying Assets at any time may have significantly different views from those of our affiliates. You are encouraged to derive information concerning each of the Underlying Assets from multiple sources, and you should not rely on the views expressed by our affiliates.

Neither the offering of the notes nor any views which our affiliates from time to time may express in the ordinary course of their businesses constitutes a recommendation as to the merits of an investment in the notes.

**Significant aspects of the tax treatment of the notes are uncertain.** — The tax treatment of the notes is uncertain. We do not plan to request a ruling from the Internal Revenue Service or from any Canadian authorities regarding the tax treatment of the notes, and the Internal Revenue Service or a court may not agree with the tax treatment described

in this pricing supplement.

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

Please read carefully the section entitled “U.S. Federal Tax Information” in this pricing supplement, the section entitled “Supplemental Tax Considerations—Supplemental U.S. Federal Income Tax Considerations” in the accompanying product supplement, the section entitled “United States Federal Income 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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### Hypothetical Return on the Notes at Maturity

The following table and examples illustrate the hypothetical returns at maturity on a \$1,000 investment in the notes based on hypothetical Percentage Changes of the Lesser Performing Underlying Asset. The “return,” as used in this section is the number, expressed as a percentage, which results from comparing the payment at maturity per \$1,000 in principal amount of the notes to \$1,000. The hypothetical total returns set forth below are based on a hypothetical Initial Level of 1,000, a hypothetical Barrier Level of 70% of each Initial Level and the Digital Return of 7.10%. The hypothetical returns set forth below are for illustrative purposes only and may not be the actual returns applicable to investors in the notes. The numbers appearing in the following table and in the examples below have been rounded for ease of analysis. We make no representation or warranty as to which Underlying Asset will be the Lesser Performing Underlying Asset. It is possible that the Final Level of each Underlying Asset will be less than its Initial Level.

The hypothetical examples shown below are intended to help you understand the terms of the notes. The actual cash amount that you will receive at maturity will depend upon whether the closing level of either Underlying Asset is below its Barrier Level on any trading day during the Monitoring Period and whether the Final Level of the Lesser Performing Underlying Asset is below its Initial Level.

Hypothetical Final Level of the Lesser Performing Underlying Asset	Hypothetical Percentage Change of the Lesser Performing Underlying Asset	Hypothetical Payment at Maturity	
		(i) if a Barrier Event does not occur during the Monitoring Period	(ii) if a Barrier Event does occur during the Monitoring Period
2,000.00	100.00%	\$1,071.00	\$1,000.00
1,500.00	50.00%	\$1,071.00	\$1,000.00
1,200.00	20.00%	\$1,071.00	\$1,000.00
1,100.00	10.00%	\$1,071.00	\$1,000.00
1,071.00	7.10%	\$1,071.00	\$1,000.00
1,050.00	5.00%	\$1,071.00	\$1,000.00
1,030.00	3.00%	\$1,071.00	\$1,000.00
1,020.00	2.00%	\$1,071.00	\$1,000.00
1,000.00	0.00%	\$1,071.00	\$1,000.00
950.00	-5.00%	\$1,071.00	\$950.00
900.00	-10.00%	\$1,071.00	\$900.00
800.00	-20.00%	\$1,071.00	\$800.00
700.00	-30.00%	\$1,071.00	\$700.00

650.00	-35.00%	N/A	\$650.00
600.00	-40.00%	N/A	\$600.00
500.00	-50.00%	N/A	\$500.00
400.00	-60.00%	N/A	\$400.00
200.00	-80.00%	N/A	\$200.00
0.00	-100.00%	N/A	\$0.00

### Hypothetical Examples of Amounts Payable at Maturity

The following examples illustrate how the returns set forth in the table above are calculated.

#### If a Barrier Event Occurs:

**Example 1: A Barrier Event occurs and the hypothetical Final Level of the Lesser Performing Underlying Asset decreases from the hypothetical Initial Level of 1,000.00 to a hypothetical Final Level of 500.00, representing a Percentage Change of -50%.** Because a Barrier Event occurs and the hypothetical Final Level of the Lesser Performing Underlying Asset is less than its hypothetical Initial Level, the investor receives a payment at maturity of \$500 per \$1,000 in principal amount of the notes, calculated as follows:

$$\$1,000 + (\$1,000 \times -50\%) = \$500$$



**Example 2: A Barrier Event occurs and the hypothetical Final Level of the Lesser Performing Underlying Asset decreases from the hypothetical Initial Level of 1,000.00 to a hypothetical Final Level of 900.00, representing a Percentage Change of -10%.** Because a Barrier Event occurs, the investor receives a payment at maturity of \$900 per \$1,000 in principal amount of the notes, calculated as follows:

$$\$1,000 + (\$1,000 \times -10\%) = \$900$$

**Example 3: A Barrier Event occurs and the hypothetical Final Level of the Lesser Performing Underlying Asset increases from the hypothetical Initial Level of 1,000.00 to a hypothetical Final Level of 1,100.00, representing a Percentage Change of 10%.** Because a Barrier Event occurs, but the Percentage Change of the Lesser Performing Underlying Asset is positive, the investor receives the principal amount.

**If a Barrier Event Does Not Occur:**

**Example 4: A Barrier Event does not occur and the hypothetical Final Level of the Lesser Performing Underlying Asset decreases from its hypothetical Initial Level of 1,000.00 to a hypothetical Final Level of 900.00, representing a Percentage Change of -10%.** Because a Barrier Event does not occur, the investor receives at maturity a payment of \$1,071.00 per \$1,000 in principal amount of the notes, representing the Digital Return, even though the value of the Lesser Performing Underlying Asset has decreased.

**Example 5: The level of the Lesser Performing Underlying Asset increases from the hypothetical Initial Level of 1,000 to a hypothetical Final Level of 1,100, representing a Percentage Change of 10%.** Because a Barrier Event has not occurred, the investor receives a payment at maturity of \$1,071.00 per \$1,000 in principal amount of the notes, representing the Digital Return. This payment reflects a return that is greater than the return represented by the Percentage Change.

**Example 6: The level of the Lesser Performing Underlying Asset increases from the hypothetical Initial Level of 1,000 to a hypothetical Final Level of 1,200, representing a Percentage Change of 20%.** Because a Barrier Event has not occurred, the investor receives a payment at maturity of \$1,071.00 per \$1,000 in principal amount of the notes, representing the Digital Return. This payment reflects a return that is less than the return represented by the Percentage Change.

## **U.S. Federal Tax Information**

By purchasing the notes, each holder agrees (in the absence of a change in law, an administrative determination or a judicial ruling to the contrary) to treat each note as a pre-paid cash-settled derivative contract for U.S. federal income tax purposes. However, the U.S. federal income tax consequences of your investment in the notes are uncertain and the Internal Revenue Service could assert that the notes should be taxed in a manner that is different from that described in the preceding sentence. Please see the discussion (including the opinion of our counsel Morrison & Foerster LLP) in the product supplement under “Supplemental Tax Considerations—Supplemental U.S. Federal Income Tax Considerations,” which applies to the notes, except that the following disclosure supplements, and to the extent inconsistent supersedes, the discussion in the product supplement. The discussions below and in the accompanying product supplement do not apply to holders subject to special rules including holders subject to Section 451(b) of the Code.

Under current Internal Revenue Service guidance, withholding on “dividend equivalent” payments (as discussed in the product supplement), if any, will not apply to notes that are issued as of the date of this pricing supplement unless such notes are “delta-one” instruments. Based on our determination that the notes are not delta-one instruments, non-U.S. holders should not generally be subject to withholding on dividend equivalent payments, if any, under the notes.

## **Supplemental Plan of Distribution (Conflicts of Interest)**

BMOCM will purchase the notes from us at a purchase price reflecting the commission set forth on the cover page of this pricing supplement. BMOCM has informed us that, as part of its distribution of the notes, it will reoffer the notes to other dealers who will sell them. Each such dealer, or each additional dealer engaged by a dealer to whom BMOCM reoffers the notes, will receive a commission from BMOCM, which will not exceed the commission set forth on the cover page. This commission includes a selling concession of up to 1.60% of the principal amount that we or one of our affiliates will pay to one or more dealers in connection with the distribution of the notes.

Certain dealers who purchase the notes for sale to certain fee-based advisory accounts may forego some or all of their selling concessions, fees or commissions. The public offering price for investors purchasing the notes in these accounts may be less than 100% of the principal amount, as set forth on the cover page of this document. Investors that hold their notes in these accounts may be charged fees by the investment advisor or manager of that account based on the amount of assets held in those accounts, including the notes.

We will deliver the notes on a date that is greater than two business days following the pricing date. Under Rule 15c6-1 of the Securities Exchange Act of 1934, trades in the secondary market generally are required to settle in two

business days, unless the parties to any such trade expressly agree otherwise. Accordingly, purchasers who wish to trade the notes more than two business days prior to the issue date will be required to specify alternative settlement arrangements to prevent a failed settlement.

We own, directly or indirectly, all of the outstanding equity securities of BMOCM, the agent for this offering. In accordance with FINRA Rule 5121, BMOCM may not make sales in this offering to any of its discretionary accounts without the prior written approval of the customer.

We reserve the right to withdraw, cancel or modify the offering of the notes and to reject orders in whole or in part. You may cancel any order for the notes prior to its acceptance.

You should not construe the offering of the notes as a recommendation of the merits of acquiring an investment linked to any Underlying Asset or as to the suitability of an investment in the notes.

BMOCM may, but is not obligated to, make a market in the notes. BMOCM will determine any secondary market prices that it is prepared to offer in its sole discretion.

We may use the final pricing supplement relating to the notes in the initial sale of the notes. In addition, BMOCM or another of our affiliates may use the final pricing supplement in market-making transactions in any notes after their initial sale. Unless BMOCM or we inform you otherwise in the confirmation of sale, the final pricing supplement is being used by BMOCM in a market-making transaction.

For a period of approximately three months following issuance of the notes, the price, if any, at which we or our affiliates would be willing to buy the notes from investors, and the value that BMOCM may also publish for the notes through one or more financial information vendors and which could be indicated for the notes on any brokerage account statements, will reflect a temporary upward adjustment from our estimated value of the notes that would otherwise be determined and applicable at that time. This temporary upward adjustment represents a portion of (a) the hedging profit that we or our affiliates expect to realize over the term of the notes and (b) the underwriting discount and selling concessions paid in connection with this offering. The amount of this temporary upward adjustment will decline to zero on a straight-line basis over the three-month period.

No Prospectus (as defined in Directive 2003/71/EC (as amended, the “Prospectus Directive”)) will be prepared in connection with the notes. Accordingly, the notes may not be offered to the public in any member state of the European Economic Area (the “EEA”), and any purchaser of the notes who subsequently sells any of the notes 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 notes 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 notes to be offered so as to enable an investor to decide to purchase or subscribe the notes, 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 notes or otherwise making them available to retail investors in the EEA has been prepared, and therefore, offering or selling the notes or otherwise making them available to any retail investor in the EEA may be unlawful under the PRIIPs Regulation.

#### **Additional Information Relating to the Estimated Initial Value of the Notes**

Our estimated initial value of the notes on the date of this preliminary pricing supplement, and that will be set forth on the cover page of the final pricing supplement relating to the notes, equals the sum of the values of the following hypothetical components:

- a fixed-income debt component with the same tenor as the notes, valued using our internal funding rate for structured notes; and

- one or more derivative transactions relating to the economic terms of the notes.

The internal funding rate used in the determination of the initial estimated value generally represents a discount from the credit spreads for our conventional fixed-rate debt. The value of these derivative transactions are derived from our internal pricing models. These models are based on factors such as the traded market prices of comparable derivative instruments and on other inputs, which include volatility, dividend rates, interest rates and other factors. As a result, the estimated initial value of the notes on the Pricing Date will be determined based on market conditions at that time.

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## **The Underlying Assets**

All disclosures contained in this pricing supplement regarding the Underlying Assets, including, without limitation, their make-up, method of calculation, and changes in their components and their historical closing values, have been derived from publicly available information prepared by the applicable sponsors. The information reflects the policies of, and is subject to change by, the sponsors. The sponsors own the copyrights and all rights to the Underlying Assets. The sponsors are under no obligation to continue to publish, and may discontinue publication of, the Underlying Assets. Neither we nor BMO Capital Markets Corp. accepts any responsibility for the calculation, maintenance or publication of any Underlying Asset or any successor index.

Investors in the notes are encouraged to review recent levels of the Underlying Assets prior to making an investment decision.

## **The S&P 500<sup>®</sup> Index**

The S&P 500<sup>®</sup> Index is intended to provide an indication of the pattern of common stock price movement. The calculation of the level of this Underlying Asset 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 this Underlying Asset by reference to the prices of the constituent stocks of this Underlying Asset without taking account of the value of dividends paid on those stocks. As a result, the return on the notes will not reflect the return you would realize if you actually owned the SPX constituent stocks and received the dividends paid on those stocks.

## **Computation of the S&P 500<sup>®</sup> Index**

While S&P currently employs the following methodology to calculate the S&P 500<sup>®</sup> Index, no assurance can be given that S&P will not modify or change this methodology in a manner that may affect the Payment at Maturity.

Historically, the market value of any component stock of the S&P 500<sup>®</sup> 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 S&P 500<sup>®</sup> Index halfway from a market capitalization weighted formula to a float-adjusted formula, before moving the S&P 500<sup>®</sup> Index to full float adjustment on September 16, 2005. S&P's criteria for selecting stocks for the S&P 500<sup>®</sup> Index did not change with the shift to float adjustment. However, the adjustment affects each company's weight in the S&P 500<sup>®</sup> Index.

Under float adjustment, the share counts used in calculating the S&P 500<sup>®</sup> 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 S&P 500<sup>®</sup> 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 S&P 500<sup>®</sup> Index. Constituents of the S&P 500<sup>®</sup> Index prior to July 31, 2017 with multiple share class lines will be grandfathered in and continue to be included in the S&P 500<sup>®</sup> Index. If a constituent company of the S&P 500<sup>®</sup> Index reorganizes into a multiple share class line structure, that company will remain in the S&P 500<sup>®</sup> Index at the discretion of the S&P Index Committee in order to minimize turnover.

The S&P 500<sup>®</sup> Index is calculated using a base-weighted aggregate methodology. The level of the S&P 500<sup>®</sup> 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 S&P 500<sup>®</sup> 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 S&P 500<sup>®</sup> Index, it serves as a link to the original base period level of the S&P 500<sup>®</sup> Index. The index divisor keeps the S&P 500<sup>®</sup> Index comparable over time and is the manipulation point for all adjustments to the S&P 500<sup>®</sup> 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 S&P 500<sup>®</sup> Index, and do not require index divisor adjustments.

To prevent the level of the S&P 500<sup>®</sup> Index from changing due to corporate actions, corporate actions which affect the total market value of the S&P 500<sup>®</sup> Index require an index divisor adjustment. By adjusting the index divisor for the change in market value, the level of the S&P 500<sup>®</sup> Index remains constant and does not reflect the corporate actions of individual companies in the S&P 500<sup>®</sup> Index. Index divisor adjustments are made after the close of trading and after the calculation of the S&P 500<sup>®</sup> 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.

### **License Agreement**



We and S&P have entered into a non-exclusive license agreement providing for the license to us and certain of our affiliates, in exchange for a fee, of the right to use the S&P 500<sup>®</sup> Index, in connection with certain securities, including the notes. The S&P 500<sup>®</sup> Index is owned and published by S&P.

The license agreement between S&P and us provides that the following language must be set forth in this pricing supplement:

The notes are not sponsored, endorsed, sold or promoted by S&P Dow Jones Indices LLC, Dow Jones, Standard and Poor's Financial Services LLC or any of their respective affiliates (collectively, "S&P Dow Jones Indices"). S&P Dow Jones Indices make no representation or warranty, express or implied, to the holders of the notes or any member of the public regarding the advisability of investing in securities generally or in the notes particularly or the ability of the Index to track general market performance. S&P Dow Jones Indices' only relationship to us with respect to the Index is the licensing of the Index and certain trademarks, service marks and/or trade names of S&P Dow Jones Indices and/or its third party licensors. The Index is determined, composed and calculated by S&P Dow Jones Indices without regard to us or the notes. S&P Dow Jones Indices have no obligation to take our needs or the needs of holders of the notes into consideration in determining, composing or calculating the Index. S&P Dow Jones Indices are not responsible for and have not participated in the determination of the prices, and amount of the notes or the timing of the issuance or sale of the notes or in the determination or calculation of the equation by which the notes are to be converted into cash. S&P Dow Jones Indices have no obligation or liability in connection with the administration, marketing or trading of the notes. There is no assurance that investment products based on the Index will accurately track index performance or provide positive investment returns. S&P Dow Jones Indices LLC and its subsidiaries are not investment advisors. Inclusion of a security or futures contract within an index is not a recommendation by S&P Dow Jones Indices to buy, sell, or hold such security or futures contract, nor is it considered to be investment advice. Notwithstanding the foregoing, CME Group Inc. and its affiliates may independently issue and/or sponsor financial products unrelated to the notes currently being issued by us, but which may be similar to and competitive with the notes. In addition, CME Group Inc. and its affiliates may trade financial products which are linked to the performance of the Index. It is possible that this trading activity will affect the value of the notes.

S&P DOW JONES INDICES DO NOT GUARANTEE THE ADEQUACY, ACCURACY, TIMELINESS AND/OR THE COMPLETENESS OF THE INDEX OR ANY DATA RELATED THERETO OR ANY COMMUNICATION, INCLUDING BUT NOT LIMITED TO, ORAL OR WRITTEN COMMUNICATION (INCLUDING ELECTRONIC COMMUNICATIONS) WITH RESPECT THERETO. S&P DOW JONES INDICES SHALL NOT BE SUBJECT TO ANY DAMAGES OR LIABILITY FOR ANY ERRORS, OMISSIONS, OR DELAYS THEREIN. S&P DOW JONES INDICES MAKE NO EXPRESS OR IMPLIED WARRANTIES, AND EXPRESSLY DISCLAIMS ALL WARRANTIES, OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE OR USE OR AS TO RESULTS TO BE OBTAINED BY US, HOLDERS OF THE NOTES, OR ANY OTHER PERSON OR ENTITY FROM THE USE OF THE INDEX OR WITH RESPECT TO ANY DATA RELATED THERETO. WITHOUT LIMITING ANY OF THE FOREGOING, IN NO EVENT WHATSOEVER SHALL S&P DOW JONES INDICES BE LIABLE FOR ANY INDIRECT, SPECIAL, INCIDENTAL, PUNITIVE, OR CONSEQUENTIAL DAMAGES INCLUDING BUT NOT LIMITED TO, LOSS OF PROFITS, TRADING LOSSES, LOST TIME OR GOODWILL, EVEN IF THEY HAVE BEEN ADVISED OF THE POSSIBILITY OF SUCH DAMAGES, WHETHER IN CONTRACT, TORT, STRICT LIABILITY, OR OTHERWISE. THERE ARE NO THIRD PARTY BENEFICIARIES OF ANY AGREEMENTS OR ARRANGEMENTS BETWEEN S&P DOW JONES INDICES AND US, OTHER THAN THE LICENSORS OF S&P DOW JONES INDICES.

S&P® is a registered trademark of Standard & Poor's Financial Services LLC and Dow Jones® is a registered trademark of Dow Jones Trademark Holdings LLC ("Dow Jones"). These trademarks have been licensed for use by Bank of Montreal. "Standard & Poor®", "S&P 500" and "S&P" are trademarks of S&P. The notes are not sponsored, endorsed, sold or promoted by S&P and S&P makes no representation regarding the advisability of investing in the notes.

### **The Russell 2000® Index**

The 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 (Bloomberg L.P. index symbol “RTY”) on January 1, 1984. The RTY was set to 135 as of the close of business on December 31, 1986. FTSE Russell calculates and publishes the RTY. 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. The RTY is determined, comprised, and calculated by FTSE Russell without regard to the notes.

### **Selection of Stocks Comprising the RTY**

All companies eligible for inclusion in the RTY must be classified as a U.S. company under FTSE Russell’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, FTSE Russell 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, FTSE Russell 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, FTSE Russell 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. FTSE Russell 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, FTSE Russell 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. Bulletin board, pink sheets, and over-the-counter (“OTC”) traded securities are not eligible for inclusion. Stocks must have a closing price at or above \$1.00 on their primary exchange on the last trading day in July 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 July, it will be considered eligible if the average of the daily closing prices (from its primary exchange) during the month of July is equal to or greater than \$1.00. Initial public offerings 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 July 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. 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, are not eligible), blank check companies, special-purpose acquisition companies, exchange traded funds, mutual funds and limited partnerships are ineligible for inclusion. Preferred and convertible preferred stock, redeemable shares, participating preferred stock, warrants, rights, installment receipts and trust receipts are not eligible for inclusion in the RTY.

Annual reconstitution is a process by which the RTY is completely rebuilt. On the rank day of July, all eligible securities are ranked by their total market capitalization. The largest 4,000 become the Russell 3000E Index, and the other FTSE Russell indexes are determined from that set of securities. 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, FTSE Russell 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.

## License Agreement

“Russell 2000” and “Russell 3000” are trademarks of FTSE Russell and have been licensed for use by us.

The free float factors for each component stock used to calculate the SX5E, as described below, are reviewed, calculated, and implemented on a quarterly basis and are fixed until the next quarterly review.

The SX5E is also reviewed on an ongoing monthly basis. Corporate actions (including initial public offerings, mergers and takeovers, spin-offs, delistings, and bankruptcy) that affect the SX5E composition are announced immediately, implemented two trading days later and become effective on the next trading day after implementation. Calculation of the SX5E

The SX5E is calculated with the “Laspeyres formula,” which measures the aggregate price changes in the component stocks against a fixed base quantity weight. The formula for calculating the SX5E value can be expressed as follows:

$$\text{Reference Asset} = \frac{\text{Free float market capitalization of the SX5E}}{\text{Divisor}} \times 1,000$$

The “free float market capitalization of the SX5E” is equal to the sum of the products of the closing price, market capitalization, the number of shares, the free float factor and the weighting cap factor for each component stock as of the time the SX5E is being calculated.

The SX5E is also subject to a divisor, which is adjusted to maintain the continuity of the SX5E values across changes due to corporate actions, such as the deletion and addition of stocks, the substitution of stocks, stock dividends, and stock splits.

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Buffered Enhanced Return Notes Linked to the  
Lesser Performing of Two Equity Indices,  
Due December 1, 2022  
Royal Bank of Canada

#### License Agreement

We have entered into a non-exclusive license agreement with STOXX providing for the license to us and certain of our affiliated or subsidiary companies, in exchange for a fee, of the right to use indices owned and published by STOXX (including the SX5E) in connection with certain securities, including the Notes offered hereby.

The license agreement between us and STOXX requires that the following language be stated in this document:

STOXX has no relationship to us, other than the licensing of the SX5E and the related trademarks for use in connection with the Notes. STOXX does not:

- sponsor, endorse, sell, or promote the Notes;
- recommend that any person invest in the Notes offered hereby or any other securities;
- have any responsibility or liability for or make any decisions about the timing, amount, or pricing of the Notes;
- have any responsibility or liability for the administration, management, or marketing of the Notes; or
- consider the needs of the Notes or the holders of the Notes in determining, composing, or calculating the SX5E, or have any obligation to do so.

STOXX will not have any liability in connection with the Notes. Specifically:

- STOXX does not make any warranty, express or implied, and disclaims any and all warranty concerning:
    - the results to be obtained by the Notes, the holders of the Notes or any other person in connection with the use of the SX5E and the data included in the SX5E;
    - the accuracy or completeness of the SX5E and its data;
    - the merchantability and the fitness for a particular purpose or use of the SX5E and its data;
  - STOXX will have no liability for any errors, omissions, or interruptions in the SX5E or its data; and
- Under no circumstances will STOXX be liable for any lost profits or indirect, punitive, special, or consequential damages or losses, even if STOXX knows that they might occur.

The licensing agreement between us and STOXX is solely for their benefit and our benefit, and not for the benefit of the holders of the Notes or any other third parties.

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Buffered Enhanced Return Notes Linked to the  
 Lesser Performing of Two Equity Indices,  
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#### Historical Information

The graph below sets forth the information relating to the historical performance of the SX5E. In addition, below the graph is a table setting forth the intra-day high, intra-day low and period-end closing levels of this Reference Asset. The information provided in this table is for the four calendar quarters of 2013, 2014, 2015, and 2016, the first three quarters of 2017, and for the period from October 1, 2017 through November 27, 2017.

We obtained the information regarding the historical performance of the SX5E in the chart below from Bloomberg Financial Markets.

We have not independently verified the accuracy or completeness of the information obtained from Bloomberg Financial Markets. The historical performance of the SX5E should not be taken as an indication of its future performance, and no assurance can be given as to the Final Level of the SX5E. We cannot give you assurance that the performance of the SX5E will result in any positive return on your initial investment.

EURO STOXX 50® Index (“SX5E”)

Period-Start Date	Period-End Date	High Intra-Day Level of this Reference Asset	Low Intra-Day Level of this Reference Asset	Period-End Closing Level of this Reference Asset
1/1/2013	3/31/2013	2,754.80	2,563.64	2,624.02
4/1/2013	6/30/2013	2,851.48	2,494.54	2,602.59
7/1/2013	9/30/2013	2,955.47	2,539.15	2,893.15
10/1/2013	12/31/2013	3,116.23	2,891.39	3,109.00
1/1/2014	3/31/2014	3,185.68	2,944.13	3,161.60
4/1/2014	6/30/2014	3,325.50	3,083.43	3,228.24
7/1/2014	9/30/2014	3,301.15	2,977.52	3,225.93
10/1/2014	12/31/2014	3,278.97	2,789.63	3,146.43
1/1/2015	3/31/2015	3,742.42	2,998.53	3,697.38
4/1/2015	6/30/2015	3,836.28	3,374.18	3,424.30
7/1/2015	9/30/2015	3,714.26	2,973.16	3,100.67
10/1/2015	12/31/2015	3,524.04	3,036.17	3,267.52
1/1/2016	3/31/2016	3,266.01	2,672.73	3,004.93
4/1/2016	6/30/2016	3,156.86	2,678.27	2,864.74
7/1/2016	9/30/2016	3,101.75	2,742.66	3,002.24
10/1/2016	12/31/2016	3,290.52	2,937.98	3,290.52
1/1/2017	3/31/2017	3,500.93	3,214.31	3,500.93
4/1/2017	6/30/2017	3,666.80	3,407.33	3,441.88
7/1/2017	9/30/2017	3,594.85	3,363.68	3,594.85
10/1/2017	11/27/2017	3,708.82	3,519.35	3,564.02

PAST PERFORMANCE IS NOT INDICATIVE OF FUTURE RESULTS.

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Buffered Enhanced Return Notes Linked to the  
Lesser Performing of Two Equity Indices,  
Due December 1, 2022  
Royal Bank of Canada

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

The following disclosure supplements, and to the extent inconsistent supersedes, the discussion in the product prospectus supplement dated January 12, 2016 under “Supplemental Discussion of U.S. Federal Income Tax Consequences.”

Under Section 871(m) of the Code, a “dividend equivalent” payment is treated as a dividend from sources within the United States. Such payments generally would be subject to a 30% U.S. withholding tax if paid to a non-U.S. holder. Under U.S. Treasury Department regulations, payments (including deemed payments) with respect to equity-linked instruments (“ELIs”) that are “specified ELIs” may be treated as dividend equivalents if such specified ELIs reference an interest in an “underlying security,” which is generally any interest in an entity taxable as a corporation for U.S. federal income tax purposes if a payment with respect to such interest could give rise to a U.S. source dividend. However, the IRS has issued guidance that states that the U.S. Treasury Department and the IRS intend to amend the effective dates of the U.S. Treasury Department regulations to provide that withholding on dividend equivalent payments will not apply to specified ELIs that are not delta-one instruments and that are issued before January 1, 2019. Based on our determination that the Notes are not delta-one instruments, non-U.S. holders should not be subject to withholding on dividend equivalent payments, if any, under the Notes. However, it is possible that the Notes could be treated as deemed reissued for U.S. federal income tax purposes upon the occurrence of certain events affecting the Reference Assets or the Notes (for example, upon a Reference Asset rebalancing), and following such occurrence the Notes could be treated as subject to withholding on dividend equivalent payments. Non-U.S. holders that enter, or have entered, into other transactions in respect of the Reference Assets or the Notes should consult their tax advisors as to the application of the dividend equivalent withholding tax in the context of the Notes and their other transactions. If any payments are treated as dividend equivalents subject to withholding, we (or the applicable withholding agent) would be entitled to withhold taxes without being required to pay any additional amounts with respect to amounts so withheld.

#### SUPPLEMENTAL PLAN OF DISTRIBUTION (CONFLICTS OF INTEREST)

Delivery of the Notes will be made against payment for the Notes on November 30, 2017, which is the third (3rd) business day following the Pricing Date (this settlement cycle being referred to as “T+3”). See “Plan of Distribution” in the prospectus dated January 8, 2016. For additional information as to the relationship between us and RBCCM, please see the section “Plan of Distribution—Conflicts of Interest” in the prospectus dated January 8, 2016.

In the initial offering of the Notes, they were offered to investors at a purchase price equal to par, except with respect to certain accounts as indicated on the cover page of this document.

We expect to deliver the Notes on a date that is greater than two business days following the trade date. 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 Notes more than two business days prior to the original issue date will be required to specify alternative arrangements to prevent a failed settlement.

The value of the Notes shown on your account statement may be based on RBCCM’s estimate of the value of the Notes if RBCCM or another of our affiliates were to make a market in the Notes (which it is not obligated to do). That estimate will be based upon the price that RBCCM may pay for the Notes in light of then prevailing market conditions, our creditworthiness and transaction costs. For a period of approximately 12 months after the issue date of the Notes, the value of the Notes that may be shown on your account statement may be higher than RBCCM’s estimated value of the Notes at that time. This is because the estimated value of the Notes will not include the



underwriting discount and our hedging costs and profits; however, the value of the Notes shown on your account statement during that period may be a higher amount, reflecting the addition of RBCCM's underwriting discount and our estimated costs and profits from hedging the Notes. This excess is expected to decrease over time until the end of this period. After this period, if RBCCM repurchases your Notes, it expects to do so at prices that reflect their estimated value.

We may use this pricing supplement in the initial sale of the Notes. In addition, RBCCM or another of our affiliates may use this pricing supplement in a market-making transaction in the Notes after their initial sale. Unless we or our agent informs the purchaser otherwise in the confirmation of sale, this pricing supplement is being used in a market-making transaction.

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Buffered Enhanced Return Notes Linked to the  
Lesser Performing of Two Equity Indices,  
Due December 1, 2022  
Royal Bank of Canada

## STRUCTURING THE NOTES

The Notes are our debt securities, the return on which is linked to the performance of the Reference Assets. As is the case for all of our debt securities, including our structured notes, the economic terms of the Notes reflect our actual or perceived creditworthiness at the time of pricing. In addition, because structured notes result in increased operational, funding and liability management costs to us, we typically borrow the funds under these Notes at a rate that is 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, is a factor that reduced the initial estimated value of the Notes at the time their terms were set. Unlike the estimated value included in this pricing supplement, any value of the Notes 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 Notes than if our initial internal funding rate were used.

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

The lower implied borrowing rate is a factor that reduced the economic terms of the Notes to you. The initial offering price of the Notes also reflects the underwriting commission and our estimated hedging costs. These factors resulted in the initial estimated value for the Notes on the Pricing Date being less than their public offering price. See “Selected Risk Considerations—The Initial Estimated Value of the Notes Is Less than the Price to the Public” above.

## VALIDITY OF THE NOTES

In the opinion of Norton Rose Fulbright Canada LLP, the issue and sale of the Notes has been duly authorized by all necessary corporate action of the Bank in conformity with the Indenture, and when the Notes have been duly executed, authenticated and issued in accordance with the Indenture and delivered against payment therefor, the Notes will be validly issued and, to the extent validity of the Notes is a matter governed by the laws of the Province of Ontario or Québec, or the laws of Canada applicable therein, and will be valid obligations of the Bank, subject to equitable remedies which may only be granted at the discretion of a court of competent authority, subject to applicable bankruptcy, to rights to indemnity and contribution under the Notes or the Indenture which may be limited by applicable law; to insolvency and other laws of general application affecting creditors’ rights, to limitations under applicable limitations statutes, and to limitations as to the currency in which judgments in Canada may be rendered, as prescribed by the Currency Act

(Canada). This opinion is given as of the date hereof and is limited to the laws of the Provinces of Ontario and Québec and the federal laws of Canada applicable thereto. In addition, this opinion is subject to customary assumptions about the Trustee’s authorization, execution and delivery of the Indenture and the genuineness of signatures and certain factual matters, all as stated in the letter of such counsel dated January 8, 2016, which has been filed as Exhibit 5.1 to Royal Bank’s Form 6-K filed with the SEC dated January 8, 2016.

In the opinion of Morrison & Foerster LLP, when the Notes have been duly completed in accordance with the Indenture and issued and sold as contemplated by the prospectus supplement and the prospectus, the Notes will be valid, binding and enforceable obligations of Royal Bank, entitled to the benefits of the Indenture, subject to applicable bankruptcy, insolvency and similar laws affecting creditors’ rights generally, concepts of reasonableness and equitable principles of general applicability (including, without limitation, concepts of good faith, fair dealing and the lack of bad faith). This opinion is given as of the date hereof and is limited to the laws of the State of New York.

This opinion is subject to customary assumptions about the Trustee's authorization, execution and delivery of the Indenture and the genuineness of signatures and to such counsel's reliance on the Bank and other sources as to certain factual matters, all as stated in the legal opinion dated January 8, 2016, which has been filed as Exhibit 5.2 to the Bank's Form 6-K dated January 8, 2016.

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