ROYAL BANK OF CANADA
Form 424B2
October 16, 2018

RBC Capital Markets®	Filed Pursuant to Rule 424(b)(2) Registration Statement No. 333-227001

Pricing Supplement

Dated October 15, 2018 To the Product Prospectus Supplement ERN-EI-1, Prospectus Supplement, and Prospectus Each Dated September 7, 2018	$700,000 Auto-Callable Barrier Notes Linked to the Lesser Performing of Two Equity Indices, Due October 20, 2022 Royal Bank of Canada

Royal Bank of Canada is offering Auto-Callable Barrier Notes (the "Notes") linked to the lesser performing of two equity indices (each, a "Reference Index" and collectively, the "Reference Indices"). The Notes offered are senior unsecured obligations of Royal Bank of Canada and under the circumstances specified below, and will have the terms described in the documents described above, as supplemented or modified by this pricing supplement. We will not make any payments on the Notes until the maturity date or a prior automatic call.

The Notes will be automatically called at the applicable Call Amount if the closing level of each Reference Index is greater than or equal to its Initial Level on any quarterly Observation Date. The Call Amounts are based on a rate of return of 8.70% per annum (the "Call Return Rate"), and will increase on each quarterly Observation Date to reflect that rate of return. If the Notes are not called, you may lose all or a substantial portion of your principal amount.

Reference Indices	Initial Levels	Barrier Levels*
Dow Jones Industrial Average® ("INDU")	25,250.55	16,412.86, which is 65.00% of its Initial Level
NASDAQ 100® Index ("NDX")	7,068.670	4,594.636, which is 65.00% of its Initial Level

* Rounded to two decimal places for the INDU and three decimal places for the NDX.

The Notes do not guarantee any return of principal at maturity. Any payments on the Notes are subject to our credit risk.

Investing in the Notes involves a number of risks. See "Additional Risk Factors Specific to the Notes" beginning on page PS-5 of the product prospectus supplement dated September 7, 2018, "Risk Factors" beginning on page S-1 of the prospectus supplement dated September 7, 2018, and "Selected Risk Considerations" beginning on page P-7 of this pricing supplement.

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

Neither the Securities and Exchange Commission nor any state securities commission has approved or disapproved of the Notes or determined that this pricing supplement is truthful or complete. Any representation to the contrary is a criminal offense.

Issuer:	Royal Bank of Canada	Stock Exchange Listing:	None
Pricing Date:	October 15, 2018	Principal Amount:	$1,000 per Note
Issue Date:	October 18, 2018	Maturity Date:	October 20, 2022
Valuation Date:			

	October 17, 2022 (which is the final Observation Date)
Initial Level:	For each Reference Index, its closing level on the pricing date.
Final Level:	For each Reference Index, its closing level on the Valuation Date.
Call Feature:	If the closing level of each Reference Index is greater than or equal to its Initial Level starting in October 2019 or on any Observation Date thereafter, the Notes will be called and we will pay the applicable Call Amount on the corresponding Call Settlement Date.
Observation Dates and Call Settlement Dates:	Annually, as set forth below.
Payment at Maturity (if held to maturity):	If the Notes are not called on any Observation Date (including the Valuation Date), we will pay you at maturity an amount based on the Final Level of the Lesser Performing Reference Index: For each $1,000 in principal amount, $1,000, unless the Final Level of the Lesser Performing Reference Index is less than its Barrier Level. If the Final Level of the Lesser Performing Reference Index is less than its Barrier Level, then the investor will receive at maturity, for each $1,000 in principal amount, a cash payment equal to: $1,000 + ($1,000 x Percentage Change of the Lesser Performing Reference Index) Investors could lose some or all of their initial investment if there has been a decline in the level of Lesser Performing Reference Index.
Lesser Performing Reference Index:	The Reference Index with the lowest Percentage Change.
CUSIP:	78013XP36

	Per Note	Total
Price to public[(1)]	100.00%	$700,000
Underwriting discounts and commissions[(1)]	2.50%	$17,500
Proceeds to Royal Bank of Canada	97.50%	$682,500

[(1)]Certain dealers who purchased the Notes for sale to certain fee-based advisory accounts may have foregone some or all of their underwriting discount or selling concessions. The public offering price for investors purchasing the Notes in these accounts was between $975.00 and $1,000 per $1,000 in principal amount.

The initial estimated value of the Notes as of the date of this pricing supplement is $960.54 per $1,000 in principal amount, which is less than the price to public. The actual value of the Notes at any time will reflect many factors, cannot be predicted with accuracy, and may be less than this amount. We describe our determination of the initial estimated value in more detail below.

RBC Capital Markets, LLC (“RBCCM”), acting as our agent, received a commission of $25.00 per $1,000 in principal amount of the Notes and used a portion of that commission to allow selling concessions to other dealers of up to $25.00 per $1,000 in principal amount of the Notes. The other dealers may forgo, in their sole discretion, some or all of their selling concessions. See “Supplemental Plan of Distribution (Conflicts of Interest)” below.

RBC Capital Markets, LLC

Auto-Callable Barrier Notes
Linked to the Lesser Performing of Two
Equity Indices

SUMMARY

The information in this "Summary" section is qualified by the more detailed information set forth in this pricing supplement, the product prospectus supplement, the prospectus supplement, and the prospectus.

General:	This pricing supplement relates to an offering of Auto-Callable Barrier Notes (the "Notes") linked to the lesser performing of two equity indices (the "Reference Indices").
Issuer:	Royal Bank of Canada ("Royal Bank")
Pricing Date:	October 15, 2018
Issue Date:	October 18, 2018
Denominations:	Minimum denomination of $1,000, and integral multiples of $1,000 thereafter.
Designated Currency:	U.S. Dollars
Call Feature:	If, on any Observation Date, the closing level of each Reference Index is greater than or equal to its Initial Level, then the Notes will be automatically called and the applicable Call Amount will be paid on the corresponding Call Settlement Date.
Call Return Rate:	8.70% per annum

	Observation Date	Call Settlement Date	Call Amounts
Observation Dates/Call Settlement Dates/Call Amounts:	October 15, 2019	October 18, 2019	$1,087
	October 15, 2020	October 20, 2020	$1,174
	October 15, 2021	October 20, 2021	$1,261
	October 17, 2022 (the "Valuation Date")	October 20, 2023 (the "Maturity Date")	$1,348

Valuation Date:	October 17, 2022
Maturity Date:	October 20, 2022
Initial Level:	25,250.55, with respect to the INDU and 7,068.670, with respect to the NDX, each of which was its closing level on the pricing date.
Final Level:	For each Reference Index, its closing level on the Valuation Date.
Barrier Level:	16,412.86, with respect to the INDU and 4,594.636, with respect to the NDX, each of which is 65.00% of its Initial Level.
Payment at Maturity (if not previously called and held to maturity):	If the Notes are not called on any Observation Date (including the Valuation Date), we will pay you at maturity an amount based on the Final Level of the Lesser Performing Reference Index: · If the Final Level of the Lesser Performing Reference Index is greater than or equal to its Barrier Level, we will pay you a cash payment equal to the principal amount. · If the Final Level of the Lesser Performing Reference Index is below its Barrier Level, you will receive at maturity, for each $1,000 in principal amount, a cash payment equal to: $1,000 + ($1,000 x Percentage Change of the Lesser Performing Reference Index) The amount of cash that you receive will be less than your principal amount, if anything, resulting in a loss that is proportionate to the decline of the Lesser Performing Reference Index from the pricing date to the Valuation Date. Investors in the Notes could lose some or all of their investment if there has been a decline in the level of the Lesser Performing Reference Index below its Barrier Level.
Percentage Change:	With respect to each Reference Index: $\frac{\text{Final Level} - \text{Initial Level}}{\text{Initial Level}}$
	The Reference Index with the lowest Percentage Change.

Lesser Performing Reference Index:	
Market Disruption Events:	The occurrence of a market disruption event (or a non-trading day) as to either of the Reference Indices will result in the postponement of an Observation Date or the Valuation Date as to that Reference Index, as described in the product prospectus supplement, but not to any non-affected Reference Index.
Calculation Agent:	RBC Capital Markets, LLC ("RBCCM")

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U.S. Tax Treatment:	By purchasing a Note, each holder agrees (in the absence of a change in law, an administrative determination or a judicial ruling to the contrary) to treat the Notes as a callable pre-paid cash-settled derivative contract linked to the Reference Indices 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 section below, “Supplemental Discussion of U.S. Federal Income Tax Consequences,” and the discussion (including the opinion of our counsel Morrison & Foerster LLP) in the product prospectus supplement dated September 7, 2018 under “Supplemental Discussion of U.S. Federal Income Tax Consequences,” which apply to the Notes.
Secondary Market:	RBCCM (or one of its affiliates), though not obligated to do so, may maintain a secondary market in the Notes after the Issue Date. The amount that you may receive upon sale of your Notes prior to maturity may be less than the principal amount of your Notes.
Listing:	The Notes will not be listed on any securities exchange.
Clearance and Settlement:	DTC global (including through its indirect participants Euroclear and Clearstream, Luxembourg as described under “Description of Debt Securities—Ownership and Book-Entry Issuance” in the prospectus dated September 7, 2018).
Terms Incorporated in the Master Note:	All of the terms appearing above the item captioned “Secondary Market” on the cover page and pages P-2 and P-3 of this pricing supplement and the terms appearing under the caption “General Terms of the Notes” in the product prospectus supplement dated September 7, 2018, as modified by this pricing supplement.

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ADDITIONAL TERMS OF YOUR NOTES

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

This pricing supplement, together with the documents listed below, contains the terms of the Notes 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 "Additional Risk Factors Specific to the Notes" in the product prospectus supplement dated September 7, 2018, as the Notes 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 Notes. You may access these documents on the Securities and Exchange Commission (the "SEC") website at www.sec.gov as follows (or if that 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/l96181424b3.htm
Prospectus Supplement dated September 7, 2018:
https://www.sec.gov/Archives/edgar/data/1000275/000121465918005975/f97180424b3.htm
Product Prospectus Supplement ERN-EI-1 dated September 7, 2018:
https://www.sec.gov/Archives/edgar/data/1000275/000114036118038044/form424b5.htm

Our Central Index Key, or CIK, on the SEC website is 1000275. As used in this pricing supplement, "we," "us," or "our" refers to Royal Bank of Canada.

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HYPOTHETICAL EXAMPLES

The table set out below is included for illustration purposes only. The table illustrates payment upon an automatic call and the Payment at Maturity of the Notes for a hypothetical range of performance for the Lesser Performing Reference Index, assuming the following terms:

Hypothetical Initial Level (for each Reference Index):	1,000.00*
Hypothetical Barrier Level (for each Reference Index):	650.00, which is 65.00% of the hypothetical Initial Level
Principal Amount:	$1,000 per Note
Call Return Rate:	8.70% per annum
Call Amounts:	$1,087 if called on the first Observation Date, increasing by $87 on each subsequent Observation Date, as set forth in the table above.

* The hypothetical Initial Level of 1,000.00 used in the examples below has been chosen for illustrative purposes only and does not represent the actual Initial Level of any Reference Index. The actual Initial Level for each Reference Index is set forth on the cover page of this pricing supplement. We make no representation or warranty as to which of the Reference Indices will be the Lesser Performing Reference Index. It is possible that the Final Level of each Reference Index will be less than its Initial Level.

Summary of the Hypothetical Examples

	Notes Are Called on an Observation Date						Notes Are Not Called on Any Observation Date			
	Example 1		Example 2		Example 3		Example 4		Example 5	
	INDU	NDX	INDU	NDX	INDU	NDX	INDU	NDX	INDU	NDX
Initial Level	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000
Closing Level on the First Observation Date	1,250	1,300	1,100	975	900	1,050	880	805	980	805
Closing Level on the Second Observation Date	N/A	N/A	1,025	1,030	850	1,200	780	900	780	1,100
Closing Levels on the Third Observation Date	N/A	N/A	N/A	N/A	850	1,200	780	900	780	1,100
Closing Level on the Final Observation Date	N/A	N/A	N/A	N/A	1,035	1,500	850	1,200	600	1,120
Percentage Change of the Reference Indices	N/A	N/A	N/A	N/A	N/A	N/A	-15%	20%	-40%	12%
Percentage Change of the Lesser Performing Reference Index	N/A		N/A		N/A		-15%		-40%	
	$1,087		$1,174				N/A		N/A	

Call Amount			$1,348 (paid on the maturity date)		
Payment at Maturity (if not previously called)	N/A	N/A	N/A	$1,000	$600

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Hypothetical Examples of Amounts Payable Upon an Automatic Call

The following hypothetical examples illustrate payments of the Call Amounts set forth in the table in the "Summary" section above.

Example 1: The level of the Lesser Performing Reference Index increases by 25% from the Initial Level to a closing level of 1,250 on the first Observation Date. Because the closing level of the Lesser Performing Reference Index on the first Observation Date is greater than its Initial Level, the investor receives on the applicable Call Settlement Date a cash payment of $1,087, representing the corresponding hypothetical Call Amount. After the Notes are called, they will no longer remain outstanding and there will be no further payments on the Notes.

Example 2: The level of the Lesser Performing Reference Index decreases by 10% from the Initial Level of 1,000 to its closing level on the first Observation Date of 900, but the level of the Lesser Performing Reference Index increases by 10% from the Initial Level to a closing level of 1,100 on the second Observation Date. Because the Notes are not called on the first Observation Date and the closing level of the Lesser Performing Reference Index on the second Observation Date is greater than its Initial Level, the investor receives on the applicable Call Settlement Date a cash payment of $1,174, representing the corresponding hypothetical Call Amount. After the Notes are called, they will no longer remain outstanding and there will be no further payments on the Notes.

Example 3: The Notes are not called on any of the Observation Dates and the Final Level of the Lesser Performing Reference Index is 1,200 on the Valuation Date, which is greater than its Initial Level. Because the Notes are not called on any of the preceding Observation Dates and the closing level of the Lesser Performing Reference Index on the Valuation Date is greater than its Initial Level, the investor receives on the Maturity Date a cash payment of $1,348, representing the corresponding hypothetical Call Amount.

Hypothetical Examples of Amounts Payable at Maturity

The following hypothetical examples illustrate how the payments at maturity set forth in the table above are calculated, assuming the Notes have not been called.

Example 4: The level of the Lesser Performing Reference Index decreases by 15% from the Initial Level to its Final Level of 850. The Notes are not called on any Observation Date because the closing level of at least one Reference Index is below its Initial Level on each Observation Date (including the Valuation Date). Because the Final Level of the Lesser Performing Reference Index is less than its Initial Level but greater than its Barrier Level, the investor receives at maturity, a cash payment of $1,000 per Note, despite the decline in the level of the Lesser Performing Reference Index.

Example 5: The level of the Lesser Performing Reference Index is 600 on the Valuation Date, which is less than its Barrier Level of 650. The Notes are not called on any Observation Date because the closing level of at least one Reference Index is below its Initial Level on each Observation Date (including the Valuation Date). Because the Final Level of the Lesser Performing Reference Index is less than its Barrier Level, we will pay only $600 for each $1,000 in the principal amount of the Notes, calculated as follows:

Principal Amount + (Principal Amount x Reference Index Return of the Lesser Performing Reference Index)
= $1,000 + ($1,000 x -40%) = $1,000 - $400 = $600

* * *

The payments shown above are entirely hypothetical; they are based on levels of the Reference Indices that may not be achieved and on assumptions that may prove to be erroneous. The actual market value of your Notes on the Maturity Date or at any other time, including any time you may wish to sell your Notes, may bear little relation to the hypothetical payments at maturity shown above, and those amounts should not be viewed as an indication of the financial return on an investment in the Notes or on an investment in the securities included in any Reference Index.

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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 Reference Indices. These risks are explained in more detail in the section "Additional Risk Factors Specific to the Notes" in the product prospectus supplement. In addition to the risks described in the prospectus supplement and the product prospectus supplement, you should consider the following:

- Principal at Risk — Investors in the Notes could lose all or a substantial portion of their principal amount if there is a decline in the level of the Lesser Performing Reference Index between the pricing date and the Valuation Date. If the Notes are not automatically called and the Final Level of the Lesser Performing Reference Index on the Valuation Date is less than its Barrier Level, the amount of cash that you receive at maturity will represent a loss of your principal that is proportionate to the decline in the closing level of the Lesser Performing Reference Index from the pricing date to the Valuation Date.
- The Notes Are Subject to an Automatic Call — If, on any Observation Date, the closing level of each Reference Index is greater than or equal to its Initial Level, then the Notes will be automatically called. If the Notes are automatically called, then, on the applicable Call Settlement Date, for each $1,000 in principal amount, you will receive the applicable Call Amount on the corresponding Call Settlement Date. You will not receive any payments after the Call Settlement Date and you will not receive any return on the Notes that exceeds the applicable Call Amount set forth above, even if the level of one or both of the Reference Indices increases substantially. You may be unable to reinvest your proceeds from the automatic call in an investment with a return that is as high as the return on the Notes.
- The Notes Do Not Pay Interest and Your Return May Be Lower than the Return on a Conventional Debt Security of Comparable Maturity – There will be no periodic interest payments on the Notes as there would be on a conventional fixed-rate or floating-rate debt security having the same maturity. The return that you will receive on the Notes, which could be negative, may be less than the return you could earn on other investments. Your return may be less than the return you would earn if you bought a conventional senior interest bearing debt security of Royal Bank.
- The Notes Are Linked to the Lesser Performing Reference Index, Even if the Other Reference Index Performs Better — If any of the Reference Indices has a Final Level that is less than its Initial Level or its Barrier Level, your return will be linked to the lesser performing of the two Reference Indices. Even if the Final Level of the other Reference Index has increased compared to its Initial Level, or has experienced a decrease that is less than that of the Lesser Performing Reference Index, your return will only be determined by reference to the performance of the Lesser Performing Reference Index, regardless of the performance of the other Reference Index.
- Your Payment on the Notes Will Be Determined by Reference to Each Reference Index Individually, Not to a Basket, and the Payment at Maturity Will Be Based on the Performance of the Lesser Performing Reference Index — The Payment at Maturity will be determined only by reference to the performance of the Lesser Performing Reference Index, regardless of the performance of the other Reference Index. 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 those basket components. However, in the case of the Notes, the individual performance of each of the Reference Indices would not be combined, and the depreciation of one Reference Index would not be mitigated by any appreciation of the other Reference Index. Instead, your return will depend solely on the Final Level of the Lesser Performing Reference Index.
- Payments on the Notes Are Subject to Our Credit Risk, and Changes in Our Credit Ratings Are Expected to Affect the Market Value of the Notes — The Notes are Royal Bank's senior unsecured debt securities. As a result, your receipt of any Call Amounts, if payable, and the amount due on the maturity date is dependent upon Royal Bank's ability to

repay its obligations on the applicable payment date. This will be the case even if the levels of the Reference Indices increase after the pricing date. No assurance can be given as to what our financial condition will be at any time during the term of the Notes.

- There May Not Be an Active Trading Market for the Notes-Sales in the Secondary Market May Result in Significant Losses — There may be little or no secondary market for the Notes. The Notes will not be listed on any securities exchange. RBCCM and other affiliates of Royal Bank may make a market for the Notes; however, they are not required to do so. RBCCM or any other affiliate of Royal Bank may stop any market-making activities at any time. Even if a secondary market for the Notes develops, it may not provide significant liquidity or trade at prices advantageous to you. We expect that transaction costs in any secondary market would be high. As a result, the difference between bid and asked prices for your Notes in any secondary market could be substantial.

- Owning the Notes Is Not the Same as Owning the Securities Represented by the Reference Indices — The return on your Notes is unlikely to reflect the return you would realize if you actually owned the securities represented by the Reference Indices. For instance, you will not receive or be entitled to receive any dividend payments or other distributions on those securities during the term of your Notes. As an owner of the Notes, you will not have voting rights or any other rights that holders of the Reference Indices may have. Furthermore, the Reference Indices may appreciate substantially during the term of the Notes, while your potential return will be limited to the applicable Call Amounts.

- The Initial Estimated Value of the Notes Is Less than the Price to the Public — The initial estimated value set forth on the cover page of this pricing supplement does not represent a minimum price at which we, RBCCM or any of our affiliates would be willing to purchase the Notes in any secondary market (if any exists) at any time. If you attempt to sell the Notes 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 levels of the Reference Indices, the borrowing rate we pay to issue securities of this kind, and the inclusion in the price to the public of the underwriting discount and the estimated costs relating to our hedging of the Notes. These factors, together with various credit, market and economic factors over the term of the Notes, are expected to reduce the price at which you may be able to sell the Notes in any secondary market and will affect the value of the Notes in complex and unpredictable ways. Assuming no change in market conditions or any other relevant factors, the price, if any, at which you may be able to sell your Notes prior to maturity may be less than your original purchase price, as any such sale price would not be expected to include the underwriting discount and the hedging costs relating to the Notes. In addition to bid-ask spreads, the value of the Notes determined by RBCCM for any secondary market price is expected to be based on the secondary rate rather than the internal funding rate used to price the Notes and determine the initial estimated value. As a result, the secondary price will be less than if the internal funding rate was used. The Notes are not designed to be short-term trading instruments. Accordingly, you should be able and willing to hold your Notes to maturity.
- The Initial Estimated Value of the Notes on the Cover Page of this Pricing Supplement Is an Estimate Only, Calculated as of the Time the Terms of the Notes Were Set — The initial estimated value of the Notes is based on the value of our obligation to make the payments on the Notes, together with the mid-market value of the derivative embedded in the terms of the Notes. See “Structuring the Notes” below. Our estimate is based on a variety of assumptions, including our credit spreads, expectations as to dividends, interest rates and volatility, and the expected term of the Notes. These assumptions are based on certain forecasts about future events, which may prove to be incorrect. Other entities may value the Notes or similar securities at a price that is significantly different than we do.

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

- Inconsistent Research — Royal Bank or its affiliates may issue research reports on securities that are, or may become, components of the Reference Indices. We may also publish research from time to time on financial markets and other matters that may influence the levels of the Reference Indices or the value of the Notes, or express opinions or provide recommendations that may be inconsistent with purchasing or holding the Notes or with the investment view implicit in the Notes or the Reference Indices. You should make your own independent investigation of the merits of investing in the Notes and the Reference Indices.
- An Investment in the Notes Is Subject to Risks Relating to Non-U.S. Securities Markets - Because certain foreign companies or foreign equity securities included in the NDX are publicly traded in the applicable foreign countries and are denominated in currencies other than U.S. dollars, an investment in the securities involves particular risks. For example, the non-U.S. securities markets may be more volatile than the U.S. securities markets, and market developments may affect these markets differently from the U.S. or other securities markets. Direct or indirect government intervention to stabilize the securities markets outside the U.S., as well as cross-shareholdings in certain companies, may affect trading prices and trading volumes in those markets. Also, the public availability of information concerning the foreign issuers may vary depending on their home jurisdiction and the reporting

requirements imposed by their respective regulators. In addition, the foreign issuers may be subject to accounting, auditing and financial reporting standards and requirements that differ from those applicable to U.S. reporting companies.

- Market Disruption Events and Adjustments — The payment at maturity, each Observation Date and the Valuation Date are subject to adjustment as described in the product prospectus supplement. For a description of what constitutes a market disruption event as well as the consequences of that market disruption event, see “General Terms of the Notes—Market Disruption Events” in the product prospectus supplement.

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INFORMATION REGARDING THE REFERENCE INDICES

All disclosures contained in this pricing supplement regarding the Reference Indices, 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. Each of these sponsors has no obligation to continue to publish, and may discontinue publication of, the applicable Reference Index. The consequences of an index sponsor discontinuing publication of a Reference Index are discussed in the section of the product prospectus supplement entitled "General Terms of the Notes—Unavailability of the Level of the Reference Asset." Neither we nor RBCCM accepts any responsibility for the calculation, maintenance or publication of any Reference Index or any successor index.

We obtained the information regarding the historical performance of each Reference Index set forth below from Bloomberg Financial Markets.

NASDAQ-100® Index ("NDX")

The NASDAQ-100® Index ("NDX") is a modified market capitalization-weighted index of 100 of the largest stocks of both U.S. and non-U.S. non-financial companies listed on The NASDAQ Stock Market based on market capitalization. It does not contain securities of financial companies, including investment companies. The NASDAQ-100® Index, which includes companies across a variety of major industry groups, was launched on January 31, 1985, with a base index value of 250.00. On January 1, 1994, the base index value was reset to 125.00. The NASDAQ OMX Group, Inc. publishes the NDX. Current information regarding the market value of the NDX is available from NASDAQ OMX Group, Inc. ("NASDAQ OMX") as well as numerous market information services. The share weights of the component securities of the NDX at any time are based upon the total shares outstanding in each of those securities and are additionally subject, in certain cases, to rebalancing. Accordingly, each underlying stock's influence on the level of the NDX is directly proportional to the value of its share weight.

Index Calculation

At any moment in time, the level of the NDX equals the aggregate value of the then-current share weights of each of the component securities, which are based on the total shares outstanding of each such component security, multiplied by each such security's respective last sale price on The NASDAQ Stock Market (which may be the official closing price published by The NASDAQ Stock Market), and divided by a scaling factor (the "divisor"), which becomes the basis for the reported level of the NDX. The divisor serves the purpose of scaling such aggregate value to a lower order of magnitude, which is more desirable for reporting purposes.

Underlying Stock Eligibility Criteria and Annual Ranking Review

Initial Eligibility Criteria

To be eligible for initial inclusion in the NDX, a security must be listed on The NASDAQ Stock Market and meet the following criteria:

- the security's U.S. listing must be exclusively on the NASDAQ Global Select Market or the NASDAQ Global Market;
- the security must be issued by a non-financial company;
- the security may not be issued by an issuer currently in bankruptcy proceedings;
- the security must generally be a common stock, ordinary share, American Depositary Receipt, or tracking stock (closed-end funds, convertible debentures, exchange traded funds, limited liability companies, limited partnership interests, preferred stocks, rights, shares or units of beneficial interests, warrants, units and other derivative securities are not included in the NDX, nor are the securities of investment companies);
- the security must have a three-month average daily trading volume of at least 200,000 shares;
- if the security is issued by an issuer organized under the laws of a jurisdiction outside the United States, it must have listed options on a recognized market in the United States or be eligible for listed-options trading on a recognized

options market in the United States;

- the issuer of the security may not have entered into a definitive agreement or other arrangement which would likely result in the security no longer being eligible;
- the issuer of the security may not have annual financial statements with an audit opinion that is currently withdrawn; and
- the issuer of the security must have "seasoned" on the NASDAQ Stock Market or another recognized market (generally, a company is considered to be seasoned if it has been listed on a market for at least three full months, excluding the first month of initial listing).

Auto-Callable Barrier Notes
Linked to the Lesser Performing of Two
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Continued Eligibility Criteria

In addition, to be eligible for continued inclusion in the NDX the following criteria apply:

- the security's U.S. listing must be exclusively on the NASDAQ Global Select Market or the NASDAQ Global Market;
- the security must be issued by a non-financial company;
- the security may not be issued by an issuer currently in bankruptcy proceedings;
- the security must have an average daily trading volume of at least 200,000 shares in the previous three-month trading period as measured annually during the ranking review process described below;
- if the issuer of the security is organized under the laws of a jurisdiction outside the United States, then such security must have listed options on a recognized market in the United States or be eligible for listed-options trading on a recognized options market in the United States, as measured annually during the ranking review process;
- the issuer of the security may not have entered into a definitive agreement or other arrangement that would likely result in the security no longer being eligible;
- the security must have an adjusted market capitalization equal to or exceeding 0.10% of the aggregate adjusted market capitalization of the NDX at each month-end. In the event that a company does not meet this criterion for two consecutive month-ends, it will be removed from the NDX effective after the close of trading on the third Friday of the following month; and
- the issuer of the security may not have annual financial statements with an audit opinion that is currently withdrawn.

These eligibility criteria may be revised from time to time by NASDAQ OMX without regard to the Notes.

Annual Ranking Review

The component securities are evaluated on an annual basis (the "Ranking Review"), except under extraordinary circumstances, which may result in an interim evaluation, as follows. Securities that meet the applicable eligibility criteria are ranked by market value. eligible securities that are already in the NDX and that are ranked in the top 100 eligible securities (based on market capitalization) are retained in the NDX. A security that is ranked 101 to 125 is also retained, provided that such security was ranked in the top 100 eligible securities as of the previous Ranking Review or was added to the NDX subsequent to the previous Ranking Review. Securities not meeting such criteria are replaced. The replacement securities chosen are those eligible securities not currently in the NDX that have the largest market capitalization. The data used in the ranking includes end of October market data and is updated for total shares outstanding submitted in a publicly filed SEC document via EDGAR through the end of November.

Replacements are made effective after the close of trading on the third Friday in December. Moreover, if at any time during the year other than the Ranking Review, a component security is determined by NASDAQ OMX to become ineligible for continued inclusion in the NDX, the security will be replaced with the largest market capitalization security meeting the eligibility criteria listed above and not currently included in the NDX.

Index Maintenance

In addition to the Ranking Review, the securities in the NDX are monitored every day by NASDAQ OMX with respect to changes in total shares outstanding arising from corporate events, such as stock dividends, stock splits and certain spin-offs and rights issuances. NASDAQ OMX has adopted the following quarterly scheduled weight adjustment procedures with respect to those changes. If the change in total shares outstanding arising from a corporate action is greater than or equal to 10%, that change will be made to the NDX as soon as practical, normally within ten days of such corporate action. Otherwise, if the change in total shares outstanding is less than 10%, then all such changes are accumulated and made effective at one time on a quarterly basis after the close of trading on the third Friday in each of March, June, September and December.

In either case, the share weights for those component securities are adjusted by the same percentage amount by which the total shares outstanding have changed in those securities. Ordinarily, whenever there is a change in the share weights, a change in a component security, or a change to the price of a component security due to spin-off, rights issuances or special cash dividends, NASDAQ OMX adjusts the divisor to ensure that there is no discontinuity in the level of the NDX that might otherwise be caused by any of those changes. All changes will be announced in advance.

Index Rebalancing

Under the methodology employed, on a quarterly basis coinciding with NASDAQ OMX's quarterly scheduled weight adjustment procedures, the component securities are categorized as either "Large Stocks" or "Small Stocks" depending on whether their current percentage weights (after taking into account scheduled weight adjustments due to stock repurchases, secondary offerings or other corporate actions) are greater than, or less than or equal to, the average percentage weight in the NDX (i.e., as a 100-stock index, the average percentage weight in the NDX is 1%).

This quarterly examination will result in an index rebalancing if it is determined that: (1) the current weight of the single largest market capitalization component security is greater than 24% or (2) the "collective weight" of those component securities, the individual current weights of which are in excess of 4.5%, when added together, exceed 48%. In addition, NASDAQ OMX may conduct a special rebalancing at any time if it is determined to be necessary to maintain the integrity of the NDX.

If either one or both of these weight distribution requirements are met upon quarterly review, or NASDAQ OMX determines that a special rebalancing is required, a weight rebalancing will be performed. First, relating to weight distribution requirement (1) above, if the current weight of the single largest component security exceeds 24%, then the weights of all Large Stocks will be scaled down proportionately towards 1% by enough of an amount for the adjusted weight of the single largest component security to be set to 20%. Second, relating to weight distribution requirement (2) above, for those component securities whose individual current weights or adjusted weights in accordance with the preceding step are in excess of 4.5%, if their "collective weight" exceeds 48%, then the weights of all Large Stocks will be scaled down proportionately towards 1% by just enough amount for the "collective weight," so adjusted, to be set to 40%.

The aggregate weight reduction among the Large Stocks resulting from either or both of the above rescalings will then be redistributed to the Small Stocks in the following iterative manner. In the first iteration, the weight of the largest Small Stock will be scaled upwards by a factor which sets it equal to the average Index weight of 1.0%. The weights of each of the smaller remaining Small Stocks will be scaled up by the same factor, reduced in relation to each stock's relative ranking among the Small Stocks, such that the smaller the component security in the ranking, the less the scale-up of its weight. This is intended to reduce the market impact of the weight rebalancing on the smallest component securities in the NDX.

In the second iteration, the weight of the second largest Small Stock, already adjusted in the first iteration, will be scaled upwards by a factor which sets it equal to the average index weight of 1%. The weights of each of the smaller remaining Small Stocks will be scaled up by this same factor, reduced in relation to each stock's relative ranking among the Small Stocks, such that, once again, the smaller the component stock in the ranking, the less the scale-up of its weight.

Additional iterations will be performed until the accumulated increase in weight among the Small Stocks exactly equals the aggregate weight reduction among the Large Stocks from rebalancing in accordance with weight distribution requirement (1) and/or weight distribution requirement (2).

Then, to complete the rebalancing procedure, once the final percent weights of each of the component securities are set, the share weights will be determined anew based upon the last sale prices and aggregate capitalization of the NDX at the close of trading on the last day in February, May, August and November. Changes to the share weights will be made effective after the close of trading on the third Friday in March, June, September and December, and an adjustment to the divisor will be made to ensure continuity of the NDX.

Ordinarily, new rebalanced weights will be determined by applying the above procedures to the current share weights. However, NASDAQ OMX may from time to time determine rebalanced weights, if necessary, by instead applying the above procedure to the actual current market capitalization of the component securities. In those instances, NASDAQ OMX would announce the different basis for rebalancing prior to its implementation.

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Auto-Callable Barrier Notes
Linked to the Lesser Performing of Two
Equity Indices

Historical Information for NASDAQ-100® Index (“NDX”)
Below is a table setting forth the intra-day high, intra-day low and period-end closing levels of this Reference Index, based on information provided by Bloomberg Financial Markets. The information provided in the table is for the period from January 1, 2008 through October 15, 2018.

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
1/1/2008	3/31/2008	2,094.220	1,668.570	1,781.930
4/1/2008	6/30/2008	2,055.820	1,776.600	1,837.090
7/1/2008	9/30/2008	1,973.560	1,496.150	1,594.630
10/1/2008	12/31/2008	1,584.260	1,018.860	1,201.340
1/1/2009	3/31/2009	1,286.680	1,040.520	1,237.010
4/1/2009	6/30/2009	1,511.940	1,211.600	1,477.250
7/1/2009	9/30/2009	1,754.540	1,394.870	1,718.990
10/1/2009	12/31/2009	1,882.580	1,652.440	1,872.020
1/1/2010	3/31/2010	1,976.380	1,712.890	1,958.340
4/1/2010	6/30/2010	2,059.420	1,734.900	1,739.140
7/1/2010	9/30/2010	2,029.650	1,700.040	1,998.040
10/1/2010	12/31/2010	2,238.920	1,963.680	2,225.720
1/1/2011	3/31/2011	2,403.520	2,188.920	2,338.990
4/1/2011	6/30/2011	2,417.830	2,180.940	2,325.070
7/1/2011	9/30/2011	2,438.440	2,034.920	2,139.180
10/1/2011	12/31/2011	2,412.520	2,042.900	2,277.830
1/1/2012	3/31/2012	2,403.520	2,188.920	2,338.990
4/1/2012	6/30/2012	2,417.830	2,180.940	2,325.070
7/1/2012	9/30/2012	2,438.440	2,034.920	2,139.180
10/1/2012	12/31/2012	2,412.520	2,042.900	2,277.830
1/1/2013	3/31/2013	2,820.669	2,689.830	2,818.690
4/1/2013	6/30/2013	3,053.507	2,730.967	2,909.599
7/1/2013	9/30/2013	3,248.523	2,913.479	3,218.198
10/1/2013	12/31/2013	3,591.996	3,117.693	3,591.996
1/1/2014	3/31/2014	3,738.319	3,418.883	3,595.736
4/1/2014	6/30/2014	3,860.646	3,414.107	3,849.479
7/1/2014	9/30/2014	4,118.908	3,837.155	4,049.445
10/1/2014	12/31/2014	4,347.087	3,700.225	4,236.279
1/1/2015	3/31/2015	4,483.970	4,078.848	4,382.819
4/1/2015	6/30/2015	4,562.333	4,283.913	4,379.865
7/1/2015	9/30/2015	4,694.134	3,787.227	4,083.372
10/1/2015	12/31/2015	4,739.753	4,124.545	4,652.008
1/1/2016	3/31/2016	3,888.781	4,490.875	4,522.119
4/1/2016	6/30/2016	4,179.735	4,364.738	4,574.383
7/1/2016	9/30/2016	4,375.724	4,838.300	4,895.496
10/1/2016	12/31/2016	4,647.590	4,863.620	4,992.078
1/1/2017	3/31/2017	5,451.497	4,884.522	5,436.232
4/1/2017	6/30/2017	5,897.688	5,353.586	5,646.917

7/1/2017	9/29/2017	6,012.954	5,579.641	5,979.298
10/1/2017	12/31/2017	6,522.699	5,955.829	6,396.422
1/1/2018	3/31/2018	7,186.088	6,164.428	6,581.126
4/1/2018	6/30/2018	7,309.992	6,322.604	7,040.802
7/1/2018	9/30/2018	7,691.102	6,969.158	7,627.650
10/1/2018	10/15/2018	7,700.557	6,892.894	7,068.670

PAST PERFORMANCE IS NOT INDICATIVE OF FUTURE RESULTS.

The graph below illustrates the performance of this Reference Index from January 1, 2008 to October 15, 2018, reflecting its Initial Level of 7,068.670. The red line represents the Barrier Level of 4,594.636, which is equal to 65.00% of its Initial Level, rounded to three decimal places.

Auto-Callable Barrier Notes
Linked to the Lesser Performing of Two
Equity Indices

Dow Jones Industrial Average® ("INDU")

The INDU

The INDU is a price-weighted index, which means an underlying stock's weight in the INDU is based on its price per share rather than the total market capitalization of the issuer. The INDU is designed to provide an indication of the composite performance of 30 common stocks of corporations representing a broad cross-section of U.S. industry. The corporations represented in the INDU tend to be market leaders in their respective industries and their stocks are typically widely held by individuals and institutional investors.

The INDU is maintained by an Averages Committee comprised of the Managing Editor of The Wall Street Journal ("WSJ"), the head of Dow Jones Indexes research and the head of CME Group Inc. research. The Averages Committee was created in March 2010, when Dow Jones Indexes became part of CME Group Index Services, LLC, a joint venture company owned 90% by CME Group Inc. and 10% by Dow Jones & Company. Generally, composition changes occur only after mergers, corporate acquisitions or other dramatic shifts in a component's core business. When such an event necessitates that one component be replaced, the entire INDU is reviewed. As a result, when changes are made they typically involve more than one component. While there are no rules for component selection, a stock typically is added only if it has an excellent reputation, demonstrates sustained growth, is of interest to a large number of investors and accurately represents the sector(s) covered by the average.

Changes in the composition of the INDU are made entirely by the Averages Committee without consultation with the corporations represented in the INDU, any stock exchange, any official agency or us. Unlike most other indices, which are reconstituted according to a fixed review schedule, constituents of the INDU are reviewed on an as-needed basis. Changes to the common stocks included in the INDU tend to be made infrequently, and the underlying stocks of the INDU may be changed at any time for any reason. The companies currently represented in the INDU are incorporated in the United States and its territories and their stocks are listed on the New York Stock Exchange and NASDAQ.

The INDU initially consisted of 12 common stocks and was first published in the WSJ in 1896. The INDU was increased to include 20 common stocks in 1916 and to 30 common stocks in 1928. The number of common stocks in the INDU has remained at 30 since 1928, and, in an effort to maintain continuity, the constituent corporations represented in the INDU have been changed on a relatively infrequent basis.

Computation of the INDU

The level of the INDU is the sum of the primary exchange prices of each of the 30 component stocks included in the INDU, divided by a divisor that is designed to provide a meaningful continuity in the level of the INDU. Because the INDU is price-weighted, stock splits or changes in the component stocks could result in distortions in the index level. In order to prevent these distortions related to extrinsic factors, the divisor is periodically changed in accordance with a mathematical formula that reflects adjusted proportions within the INDU. The current divisor of the INDU is published daily in the WSJ and other publications. In addition, other statistics based on the INDU may be found in a variety of publicly available sources.

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Auto-Callable Barrier Notes
Linked to the Lesser Performing of Two
Equity Indices

Historical Information

Below is a table setting forth the intra-day high, intra-day low and period-end closing levels of this Reference Index, based on information provided by Bloomberg Financial Markets. The information provided in the table is for the period from January 1, 2008 through October 15, 2018.

Period-Start Date	Period-End Date	High Intra-Day Level of this Reference Index	Low Intra-Day Level of this Reference Index	Period-End Closing Level of this Reference Index
1/1/2008	3/31/2008	13,279.54	11,634.82	12,262.89
4/1/2008	6/30/2008	13,136.69	11,287.56	11,350.01
7/1/2008	9/30/2008	11,867.11	10,365.45	10,850.66
10/1/2008	12/31/2008	10,882.52	7,449.38	8,668.39
1/1/2009	3/31/2009	9,088.06	6,469.95	7,608.92
4/1/2009	6/30/2009	8,877.93	7,483.87	8,447.00
7/1/2009	9/30/2009	9,917.99	8,087.19	9,712.28
10/1/2009	12/31/2009	10,580.33	9,430.08	10,545.41
1/1/2010	3/31/2010	10,955.48	9,835.09	10,856.63
4/1/2010	6/30/2010	11,258.01	9,753.84	9,774.02
7/1/2010	9/30/2010	10,948.88	9,614.32	10,788.05
10/1/2010	12/31/2010	11,625.00	10,711.12	11,569.71
1/1/2011	3/31/2011	12,391.29	11,555.48	12,319.73
4/1/2011	6/30/2011	12,876.00	11,862.53	12,414.34
7/1/2011	9/30/2011	12,753.89	10,597.14	10,913.38
10/1/2011	12/31/2011	12,328.47	10,404.49	12,217.56
1/1/2012	3/31/2012	13,289.08	12,221.19	13,212.04
4/1/2012	6/30/2012	13,338.66	12,035.09	12,880.09
7/1/2012	9/30/2012	13,653.24	12,492.25	13,437.13
10/1/2012	12/31/2012	13,661.87	12,471.49	13,104.14
1/1/2013	3/31/2013	14,585.10	13,104.30	14,578.54
4/1/2013	6/30/2013	15,542.40	14,434.43	14,909.60
7/1/2013	9/30/2013	15,709.58	14,760.41	15,129.67
10/1/2013	12/31/2013	16,588.25	14,719.43	16,576.66
1/1/2014	3/31/2014	16,573.07	15,340.69	16,457.66
4/1/2014	6/30/2014	16,978.02	16,015.32	16,826.60
7/1/2014	9/30/2014	17,350.64	16,333.78	17,042.90
10/1/2014	12/31/2014	18,103.45	15,855.12	17,823.07
1/1/2015	3/31/2015	18,288.63	17,037.76	17,776.12
4/1/2015	6/30/2015	18,351.36	17,576.50	17,619.51
7/1/2015	9/30/2015	18,137.12	15,370.33	16,284.70
10/1/2015	12/31/2015	17,977.85	16,013.66	17,425.03
1/1/2016	3/31/2016	17,790.11	15,450.56	17,685.09
4/1/2016	6/30/2016	18,167.63	17,063.08	17,929.99
7/1/2016	9/30/2016	18,668.44	17,713.45	18,308.15
10/1/2016	12/31/2016	19,987.63	17,883.56	19,762.60
1/1/2017	3/31/2017	21,169.11	19,677.94	20,663.22
4/1/2017	6/30/2017	21,535.03	20,379.55	21,349.63

7/1/2017	9/7/2017	22,419.51	21,279.30	22,405.09
10/1/2017	12/31/2017	24,876.07	22,416.00	24,719.22
1/1/2018	3/31/2018	26,616.71	23,360.29	24,103.11
4/1/2018	6/30/2018	25,402.83	23,344.52	24,271.41
7/1/2018	9/30/2018	26,769.16	24,077.56	26,458.31
10/1/2018	10/15/2018	26,951.81	24,899.77	25,250.55

PAST PERFORMANCE IS NOT INDICATIVE OF FUTURE RESULTS.

Auto-Callable Barrier Notes
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Equity Indices

The graph below illustrates the performance of this Reference Index from January 1, 2008 to October 15, 2018, reflecting its Initial Level of 25,250.55. The red line represents the Barrier Level of 16,412.86, which is equal to 65.00% of its Initial Level, rounded to two decimal places.

Auto-Callable Barrier Notes
Linked to the Lesser Performing of Two
Equity Indices

SUPPLEMENTAL DISCUSSION OF U.S. FEDERAL INCOME TAX CONSEQUENCES

The following disclosure supplements, and to the extent inconsistent supersedes, the discussion in the product prospectus supplement dated September 7, 2018 under "Supplemental Discussion of U.S. Federal Income Tax Consequences."

Under Section 871(m) of the Code, a "dividend equivalent" payment is treated as a dividend from sources within the United States. Such payments generally would be subject to a 30% U.S. withholding tax if paid to a non-U.S. holder. Under U.S. Treasury Department regulations, payments (including deemed payments) with respect to equity-linked instruments ("ELIs") that are "specified ELIs" may be treated as dividend equivalents if such specified ELIs reference an interest in an "underlying security," which is generally any interest in an entity taxable as a corporation for U.S. federal income tax purposes if a payment with respect to such interest could give rise to a U.S. source dividend. However, the IRS has issued guidance that states that the U.S. Treasury Department and the IRS intend to amend the effective dates of the U.S. Treasury Department regulations to provide that withholding on dividend equivalent payments will not apply to specified ELIs that are not delta-one instruments and that are issued before January 1, 2021. Based on our determination that the Notes are not delta-one instruments, non-U.S. holders should not be subject to withholding on dividend equivalent payments, if any, under the Notes. However, it is possible that the Notes could be treated as deemed reissued for U.S. federal income tax purposes upon the occurrence of certain events affecting a Reference Index or the Notes (for example, upon a Reference Index 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 Indices 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 October 18, 2018, 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 September 7, 2018. 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 September 7, 2018.

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 9 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.

STRUCTURING THE NOTES

The Notes are our debt securities, the return on which is linked to the performance of the Reference Indices. 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 Indices, 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 September 7, 2018, which has been filed as Exhibit 5.1 to Royal Bank's Form 6-K dated September 7, 2018.

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 the 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 September 7, 2018, which has been filed as Exhibit 5.2 to the Bank's Form 6-K dated September 7, 2018.