

ROYAL BANK OF CANADA  
Form 424B2  
May 22, 2018

RBC Capital Markets® Filed Pursuant to Rule 424(b)(2)  
Registration Statement No. 333-208507

Pricing Supplement

Dated May 18, 2018

To the Product

Prospectus Supplement \$495,000

ERN-ETF-1 Dated Absolute Return Buffered Return Notes

January 11, 2016, the Linked to the Lesser Performing of One Exchange

Prospectus Supplement Traded Fund and One Equity Index, Due May 21, 2021

Dated January 8, 2016, Royal Bank of Canada

and the Prospectus Dated

January 8, 2016

Royal Bank of Canada is offering Absolute Return Buffered Return Notes (the “Notes”) linked to the lesser performing of one exchange traded fund and one equity index (each, a “Reference Asset” and collectively, the “Reference Assets”). The Notes offered are senior unsecured obligations of Royal Bank of Canada and will have the terms described in the documents described above, as supplemented or modified by this pricing supplement.

Reference Assets	Initial Levels	Buffer Levels
iShares 20+ Year Treasury Bond ETF (“TLT”)	\$117.21	\$86.74, which is 74% of its Initial Level*
S&P 500® Index (“SPX”)	2,712.97	2,007.60, which is 74% of its Initial Level*

\*Rounded to two decimal places

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-6 of the product prospectus supplement dated January 11, 2016, on page S-1 of the prospectus supplement dated January 8, 2016, 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.

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:	May 18, 2018	Principal Amount:	\$1,000 per Note
Issue Date:	May 23, 2018	Maturity Date:	May 21, 2021
Valuation Date:	May 18, 2021		
Initial Level:	\$117.21 with respect to the TLT and 2,712.97 with respect to the SPX, each of which was its closing price or closing level, as applicable, on the Pricing Date.		
Final Level:	For each Reference Asset, its closing price or closing level, as applicable, on the Valuation Date.		

If, on the Valuation Date, the Final Level of the Lesser Performing Reference Asset is greater than or equal to its Initial Level, then the investor will receive a return equal to the Percentage Change (as defined below) of the Lesser Performing Reference Asset.

If the Final Level of the Lesser Performing Reference Asset is less than its Initial Level, but greater than or equal

Redemption Amount: to its Buffer Level (74% of its Initial Level), then the investor will receive a one-for-one positive return equal to the absolute value of the Percentage Change of the Lesser Performing Reference Asset.

If the Final Level of the Lesser Performing Reference Asset is less than its Buffer Level, then the investor will lose 1% of the principal amount for any decrease in the value of the Lesser Performing Reference Asset beyond its Buffer Level. An investor could lose some or substantially all of its investment in the Notes.

Lesser Performing Reference Asset: The Reference Asset which has the lowest Percentage Change.

Interest Payments: None.

CUSIP: 78013XKU1

	Per Note	Total
Price to public <sup>(1)</sup>	100.00%	\$495,000.00
Underwriting discounts and commissions <sup>(1)</sup>	2.25%	\$11,137.50
Proceeds to Royal Bank of Canada	97.75%	\$483,862.50

<sup>(1)</sup>Certain dealers who purchase the Notes for sale to certain fee-based advisory accounts may forego some or all of their underwriting discount or selling concessions. The public offering price for investors purchasing the Notes in these accounts may be between \$977.50 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 \$940.40 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, which we refer to as RBCCM, acting as agent for Royal Bank of Canada, received a commission of \$22.50 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 \$22.50 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.

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**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 Absolute Return Buffered Return Notes (the “Notes”) linked to the lesser performing of one exchange traded fund and one equity index (the “Reference Assets”). As set forth in more detail below, the TLT principally holds certain U.S. government debt securities.

**Issuer:** Royal Bank of Canada (“Royal Bank”)

**Issue:** Senior Global Medium-Term Notes, Series G

**Pricing Date:** May 18, 2018

**Issue Date:** May 23, 2018

**Term:** 3 years

**Denominations:** Minimum denomination of \$1,000, and integral multiples of \$1,000 thereafter.

**Designated Currency:** U.S. Dollars

**Valuation Date:** May 18, 2021

**Maturity Date:** May 21, 2021

**Initial Level:** \$117.21 with respect to the TLT and 2,712.97 with respect to the SPX, each of which was its closing price or closing level, as applicable, on the Pricing Date.

**Final Level:** For each Reference Asset, its closing price or closing level, as applicable, on the Valuation Date.

**Buffer Level:** For each Reference Asset, 74% of its Initial Level, as set forth on the cover page.

**Buffer Percentage:** 26%

**Redemption Amount:** On the Valuation Date, we will pay you at maturity an amount based on the Final Level of the Lesser Performing Reference Asset:

- If the Final Level of the Lesser Performing Reference Asset is greater than or equal to its Initial Level, then the investor will receive an amount equal to:  
 $\$1,000 + (\$1,000 \times \text{Percentage Change of the Lesser Performing Reference Asset})$
- If the Final Level of the Lesser Performing Reference Asset is less than its Initial Level, but greater than or equal to its Buffer Level, then the investor will receive a one-for-one positive return equal to the absolute value of the Percentage Change of the Lesser Performing Reference Asset, calculated as follows:  
 $\$1,000 + [\$1,000 \times (-1 \times \text{Percentage Change of the Lesser Performing Asset})]$
- If the Final Level of the Lesser Performing Reference Asset is less than its Buffer Level, then

the investor will receive an amount equal to:  
 $\$1,000 + [\$1,000 \times (\text{Percentage Change of the Lesser Performing Reference Asset} + \text{Buffer Percentage})]$

In this case, the amount of cash that you receive will be less than your principal amount, resulting in a loss that is proportionate to the decline of the Lesser Performing Reference Asset from the Pricing Date to the Valuation Date beyond its Buffer Level. Investors in the Notes could lose some or substantially all of their investment if there has been a decline in the value of the Lesser Performing Reference Asset below its Buffer Level.

Percentage Change:      With respect to each Reference Asset:  
Final Level – Initial Level  
Initial Level

Lesser Performing Reference Asset:      The Reference Asset which has the lowest Percentage Change.

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Market Disruption Event:	If a market disruption event occurs on the Valuation Date as to a Reference Asset, the determination of the Final Level of that Reference Asset will be postponed. However, the determination of the Final Level of any Reference Asset that is not affected by that market disruption event will not be postponed.
Calculation Agent:	RBC Capital Markets, LLC (“RBCCM”)
U.S. Tax Treatment:	By purchasing a Note, each holder agrees (in the absence of a change in law, an administrative determination or a judicial ruling to the contrary) to treat the Note as a pre-paid cash-settled derivative contract in respect of the Reference Assets 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 January 11, 2016 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.
Listing:	The Notes will not be listed on any securities exchange.
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 January 8, 2016).
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 January 11, 2016, as modified by this pricing supplement. In addition to those terms, the following two sentences are also incorporated into the master note: RBC confirms that it fully understands and is able to calculate the effective annual rate of interest applicable to the Notes based on the methodology for calculating per annum rates provided for in the Notes. RBC irrevocably agrees not to plead or assert Section 4 of the Interest Act (Canada), whether by way of defense or otherwise, in any proceeding relating to the Notes.

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#### ADDITIONAL TERMS OF YOUR NOTES

You should read this pricing supplement together with the prospectus dated January 8, 2016, as supplemented by the prospectus supplement dated January 8, 2016 and the product prospectus supplement dated January 11, 2016, relating to our Senior Global Medium-Term Notes, Series G, 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, including “—Additional Terms Related to the SPX” below.

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 January 8, 2016 and “Additional Risk Factors Specific to the Notes” in the product prospectus supplement dated January 11, 2016, 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](http://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 January 8, 2016:

<http://www.sec.gov/Archives/edgar/data/1000275/000121465916008810/j18160424b3.htm>

Prospectus Supplement dated January 8, 2016:

<http://www.sec.gov/Archives/edgar/data/1000275/000121465916008811/p14150424b3.htm>

Product Prospectus Supplement ERN-ETF-1 dated January 11, 2016:

<https://www.sec.gov/Archives/edgar/data/1000275/000114036116047385/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 the hypothetical Redemption Amount of the Notes for a hypothetical range of performance for the Lesser Performing Reference Asset, assuming the following terms:

Hypothetical Initial Level (for each Reference Asset): 1,000.00\*  
 Hypothetical Buffer Level (for each Reference Asset): 740.00, which is 74% of the hypothetical Initial Level  
 Buffer Percentage: 26%  
 Principal Amount: \$1,000 per Note

\* 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 either Reference Asset. The actual Initial Levels for each Reference Asset is set forth on the cover page of this pricing supplement. We make no representation or warranty as to which of the Reference Assets will be the Lesser Performing Reference Asset. It is possible that the Final Level of each Reference Asset will be less than its Initial Level.

Hypothetical Final Levels of the Lesser Performing Reference Asset are shown in the first column on the left. The second column shows its hypothetical Percentage Changes. The third column shows the hypothetical Redemption Amount to be paid on the Notes per \$1,000 in principal amount.

Hypothetical Final Level of the Lesser Performing Reference Asset	Hypothetical Percentage Change of the Lesser Performing Reference Asset	Hypothetical Redemption Amount per \$1,000 in Principal Amount
1,300.00	30.00%	\$1,300.00
1,200.00	20.00%	\$1,200.00
1,100.00	10.00%	\$1,100.00
1,000.00	0.00%	\$1,000.00
900.00	-10.00%	\$1,100.00
800.00	-20.00%	\$1,200.00
740.00	-26.00%	\$1,260.00
700.00	-30.00%	\$960.00
600.00	-40.00%	\$860.00
500.00	-50.00%	\$760.00
400.00	-60.00%	\$660.00
250.00	-75.00%	\$510.00
0.00	-100.00%	\$260.00

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#### 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.

Example 1: The value of the Lesser Performing Reference Asset increases by 10% from the Initial Level of 1,000.00 to its Final Level of 1,100.00. Because the Final Level of the Lesser Performing Reference Asset is greater than the Initial Level, the investor receives at maturity, a cash payment of \$1,100.00 per Note, calculated as follows:  
 $\$1,000 + (\$1,000 \times \text{Percentage Change of the Lesser Performing Reference Asset})$   
 $= \$1,000 + (\$1,000 \times 10\%) = \$1,100.00$

Example 2: The value of the Lesser Performing Reference Asset decreases by 20% from the Initial Level of 1,000.00 to its Final Level of 800.00. Because the Final Level of the Lesser Performing Reference Asset is less than the Initial Level but greater than its Buffer Level of 740.00, the investor receives at maturity, a positive return equal to the absolute value of the Percentage Change, despite the 20% decline in the value of the Lesser Performing Reference Asset, calculated as follows:

$\$1,000 + [\$1,000 \times (-1 \times \text{Percentage Change of the Lesser Performing Reference Asset})]$   
 $= \$1,000 + [\$1,000 \times (-1 \times -20\%)] = \$1,000 + \$200 = \$1,200.00.$

Example 3: The value of the Lesser Performing Reference Asset is 400.00 on the Valuation Date, which is less than its Buffer Level of 740.00. Because the Final Level of the Lesser Performing Reference Asset is less than its Buffer Level of 740.00, we will pay only \$660.00 for each \$1,000 in the principal amount of the Notes, calculated as follows:  
 $\text{Principal Amount} + [\text{Principal Amount} \times (\text{Reference Asset Return of the Lesser Performing Reference Asset} + \text{Buffer Percentage})]$

$= \$1,000 + [\$1,000 \times (-60.00\% + 26\%)] = \$1,000 - \$340.00 = \$660.00$

\* \* \*

The Payments at Maturity shown above are entirely hypothetical; they are based on prices of the Reference Assets that may not be achieved on the Valuation Date 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 Redemption Amounts 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 TLT or the securities held by or included in either Reference Asset.

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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 Assets. 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 some or substantially all of their principal amount if there is a decline in the value of the Lesser Performing Reference Asset between the Pricing Date and the Valuation Date of more than 26%. You will lose 1% of the principal amount of your Notes for each 1% that the Lesser Performing Reference Asset has declined below its Buffer Level.

**Your Redemption Amount Will Be Determined Solely by Reference to the Lesser Performing Reference Asset Even if the Other Reference Asset Performs Better –** Your Redemption Amount will be determined solely by reference to the performance of the Lesser Performing Reference Asset. Even if the Final Level of the other Reference Asset has increased compared to its Initial Level, or has experienced a decrease that is less than that of the Lesser Performing Reference Asset, your return will only be determined by reference to the performance of the Lesser Performing Reference Asset, regardless of the performance of the other Reference 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 components, as scaled by the weighting of that basket component. However, in the case of the Notes, the individual performance of each of the Reference Assets would not be combined, and the depreciation of one Reference Asset would not be mitigated by any appreciation of the other Reference Asset. Instead, your return will depend solely on the Final Level of the Lesser Performing Reference Asset.

**The Notes Do Not Pay Interest and Your Return May Be Lower than the Return on a Conventional Debt Security of Comparable Maturity –** You will not receive any 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. Even if your return is positive, your return may be less than the return you would earn if you bought a conventional senior interest bearing debt security of Royal Bank.

**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 the Redemption Amount is dependent upon Royal Bank’s ability to repay its obligations at that time. This will be the case even if the prices or levels of the Reference Assets increase after the Pricing Date. No assurance can be given as to what our financial condition will be at the maturity 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.

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 prices or levels of the Reference Assets, 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.

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The Initial Estimated Value of the Notes 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 the Reference Assets or on securities that are, or may become, components of the Reference Assets. We may also publish research from time to time on financial markets and other matters that may influence the prices or levels of the Reference Assets 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 Assets. You should make your own independent investigation of the merits of investing in the Notes and the Reference Assets.

Market Disruption Events and Adjustments – The Redemption Amount and the Valuation Date are subject to adjustment as to each Reference Asset 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 and “—Additional Terms of Your Notes Related to the SPX—Market Disruption Events” below.

Our Business Activities May Create Conflicts of Interest — We and our affiliates expect to engage in trading activities related to the Reference Assets or the securities held by or included in the Reference Assets that are not for the account of holders of the Notes or on their behalf. These trading activities may present a conflict between the holders’ interests in the Notes and the interests we and our affiliates will have in their proprietary accounts, in facilitating transactions, including options and other derivatives transactions, for their customers and in accounts under their management. These trading activities, if they influence the prices or levels of the Reference Assets, could be adverse to the interests of the holders of the Notes. We and one or more of our affiliates may, at present or in the future, engage in business with the issuers of the securities held by or included in the SPX, including making loans to or providing advisory services. These services could include investment banking and merger and acquisition advisory services. These activities may present a conflict between our or one or more of our affiliates’ obligations and your interests as a holder of the Notes. Moreover, we and our affiliates may have published, and in the future expect to publish, research reports with respect to the Reference Assets or securities held by or included in the Reference Assets. This research is modified from time to time without notice and may express opinions or provide recommendations that are inconsistent with purchasing or holding the Notes. Any of these activities by us or one or more of our affiliates may affect the prices or levels of the Reference Assets, and, therefore, the market value of the Notes.

You Will Not Have Any Shareholder Rights and Will Have No Right to Receive Any Shares of the TLT or the Securities Held by or Included in the Reference Assets at Maturity — The return on your Notes is unlikely to reflect the return you would realize if you actually owned shares of the TLT or the securities held by or included in a Reference Asset. For instance, you will not receive or be entitled to receive any dividend or interest 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 those securities may have. The Final Level of either Reference Asset will not reflect any dividends or interest payments on the TLT or the securities held by or included in the Reference Asset, and accordingly, any positive return on the Notes may be less than the potential positive return on the TLT or the securities held by or included in a Reference Asset.

The TLT and its Underlying Index Are Different — The performance of the TLT may not exactly replicate the performance of its underlying index, the ICE U.S. Treasury 20+ Year Bond Index (the “Underlying Index”), because the TLT will reflect transaction costs and fees that are not included in the calculation of its Underlying Index. It is also possible that the performance of the TLT may not fully replicate or may in certain circumstances diverge significantly from the performance of its Underlying Index due to the temporary unavailability of certain securities in the secondary market, the performance of any derivative instruments contained in the TLT or due to other circumstances. The TLT may use futures contracts, options, swap agreements, currency forwards and repurchase agreements in seeking performance that corresponds to its Underlying Index and in managing cash flows.

During periods of market volatility, securities held by the TLT may be unavailable in the secondary market, market participants may be unable to calculate accurately the net asset value per share of the TLT and the liquidity of the TLT may be adversely affected. This kind of market volatility may also disrupt the ability of market participants to create and redeem shares of the TLT. Further, market volatility may adversely affect, sometimes materially, the prices at which market participants are willing to buy and sell shares of the TLT. As a result, under these circumstances, the market value of shares of the TLT may vary

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substantially from the net asset value per share of the TLT. For all of the foregoing reasons, the performance of the TLT may not correlate with the performance of its Underlying Index as well as the net asset value per share of the TLT, which could materially and adversely affect the value of the Notes in the secondary market and/or reduce your payment at maturity.

**The TLT Is Subject to Management Risks** — The TLT is subject to management risk, which is the risk that the investment advisor's investment strategy, the implementation of which is subject to a number of constraints, may not produce the intended results. For example, the investment advisor may invest a portion of the TLT's assets in securities not included in the relevant industry or sector but which the investment advisor believes will help the TLT track the relevant industry or sector.

**Adjustments to the Reference Assets or the Underlying Index Could Adversely Affect the Notes** — The investment advisor or the sponsor of the relevant Reference Asset or the Underlying Index (as defined below) is responsible for calculating and maintaining the relevant Reference Asset or the Underlying Index. The investment advisor or the sponsor can add, delete or substitute the securities comprising the relevant Reference Asset or the Underlying Index. The investment advisor or the sponsor may make other methodological changes that could change the value of the relevant Reference Asset or the Underlying Index at any time. If one or more of these events occurs, the calculation of the amount payable at maturity may be adjusted to reflect such event or events. Consequently, any of these actions could adversely affect the amount payable at maturity and/or the market value of the Notes.

**We and Our Affiliates Do Not Have Any Affiliation with the Advisor or the Sponsor of the Reference Assets or the Underlying Index and Are Not Responsible for its Public Disclosure of Information** — We and our affiliates are not affiliated with the investment advisor or the sponsor of either Reference Asset or the Underlying Index of the TLT in any way and have no ability to control or predict its actions, including any errors in or discontinuance of disclosure regarding its methods or policies relating to the Reference Assets or the Underlying Index. The investment advisor or the sponsor of either Reference Asset or the Underlying Index is not involved in the offering of the Notes in any way and has no obligation to consider your interests as an owner of the Notes in taking any actions relating to the Reference Assets that might affect the value of the Notes. Neither we nor any of our affiliates has independently verified the adequacy or accuracy of the information about the investment advisor, the sponsor, or the Reference Assets contained in any public disclosure of information. You, as an investor in the Notes, should make your own investigation into the Reference Assets.

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#### ADDITIONAL TERMS OF YOUR NOTES RELATED TO THE SPX

##### Closing Level

The closing level of the SPX on any trading day will equal its closing level published following the regular official weekday close of trading on that trading day.

A “trading day” as to the SPX means a day on which the principal trading market for the SPX is open for trading.

##### Unavailability of the Level of the SPX

If the sponsor of the SPX discontinues publication of the SPX and its sponsor or another entity publishes a successor or substitute index that the calculation agent determines, in its sole discretion, to be comparable to the SPX (such successor or substitute index being referred to in this section as a “successor index”), then any subsequent index closing level will be determined by reference to the published level of that successor index at the regular weekday close of trading on the applicable trading day.

Upon any selection by the calculation agent of a successor index, the calculation agent will provide written notice to the trustee of the selection, and the trustee will furnish written notice thereof, to the extent the trustee is required to under the senior debt indenture, to each noteholder, or in the case of global notes, the depositary, as holder of the global notes.

If a successor index is selected by the calculation agent, that successor index will be used as a substitute for the SPX for all purposes, including for purposes of determining whether a market disruption event exists with respect to the SPX.

If the sponsor of the SPX discontinues publication of the SPX prior to, and that discontinuance is continuing on, any trading day on which the level of the SPX must be determined, and the calculation agent determines, in its sole discretion, that no successor index is available at that time, then the calculation agent will determine the level of the SPX for the relevant date in accordance with the formula for and method of calculating the SPX last in effect prior to the discontinuance, without rebalancing or substitution, using the closing level (or, if trading in the relevant underlying securities or components of the SPX have been materially suspended or materially limited, its good faith estimate of the closing level that would have prevailed but for that suspension or limitation) at the close of the principal trading session of the relevant exchange on that date of each security or component most recently comprising the SPX. Notwithstanding these alternative arrangements, discontinuance of the publication of the SPX may adversely affect the value of your Notes.

If at any time the method of calculating a closing level for the SPX or a successor index is changed in a material respect, or if the SPX is in any other way modified so that it does not, in the opinion of the calculation agent, fairly represent its level had those changes or modifications not been made, then, from and after that time, the calculation agent will, at the close of business in New York City on the applicable trading day, make such calculations and adjustments as, in the good faith judgment of the calculation agent, may be necessary in order to arrive at a level of an index comparable to such index as if those changes or modifications had not been made. Accordingly, if the method of calculating an index is modified so that the level of that index is a fraction of what it would have been if it had not been modified (e.g., due to a split in that index), then the calculation agent will adjust the level of that index in order to arrive at a level of that index as if it had not been modified (e.g., as if such split had not occurred).

##### Market Disruption Events

A “market disruption event” with respect to the SPX or a successor index means any event, circumstance or cause which we determine, and the calculation agent confirms, has or will have a material adverse effect on our ability to perform our obligations under the Notes or to hedge our position in respect of our obligations to make payment of amounts owing thereunder and more specifically includes the following events to the extent that they have such effect with respect to that index:

- a suspension, absence or limitation of trading in index components constituting 20% or more, by weight, of such index;
- a suspension, absence or limitation of trading in futures or options contracts relating to an index on their respective markets;
- any event that disrupts or impairs, as determined by the calculation agent, the ability of market participants to (i) effect transactions in, or obtain market values for, index components constituting 20% or more, by weight, of such index, or (ii) effect transactions in, or obtain market values for, futures or options contracts relating to such index on their respective markets;
- the closure on any day of the primary market for futures or options contracts relating to such index or index components constituting 20% or more, by weight, of such index on a scheduled trading day prior to the scheduled weekday closing time of that market (without regard to after hours or any other trading outside of the regular trading

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session hours) unless such earlier closing time is announced by the primary market at least one hour prior to the earlier of (i) the actual closing time for the regular trading session on such primary market on such scheduled trading day for such primary market and (ii) the submission deadline for orders to be entered into the relevant exchange system for execution at the close of trading on such scheduled trading day for such primary market;  
any scheduled trading day on which (i) the primary markets for index components constituting 20% or more, by weight, of such index or (ii) the exchanges or quotation systems, if any, on which futures or options contracts on such index are traded, fails to open for trading during its regular trading session; or  
any other event, if the calculation agent determines in its sole discretion that the event interferes with our ability or the ability of any of our affiliates to unwind all or a portion of a hedge with respect to the Notes that we or our affiliates have effected or may effect.

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#### INFORMATION REGARDING THE REFERENCE ASSETS

We have derived the following information regarding each of the applicable Reference Assets from publicly available documents. We have not independently verified the accuracy or completeness of the following information.

iShares 20+ Year Treasury Bond ETF (“TLT”)

The shares of the TLT are issued by iShares, Inc. (“iShare®”), a registered investment company, which consists of numerous separate investment portfolios, including the TLT. The TLT seeks results that correspond generally to the price and yield performance, before fees and expenses, of the long-term sector of the United States Treasury market, as defined by the ICE U.S. Treasury 20+ Year Bond Index. BlackRock Fund Advisors (“BFA” or “BlackRock®”) serves as the investment advisor to the TLT, which is an indirect wholly-owned subsidiary of BlackRock, Inc.

Information provided to or filed with the SEC by iShares® under the Investment Company Act of 1940, as amended, can be located at the SEC’s facilities or through the SEC’s website at [www.sec.gov](http://www.sec.gov) by reference to SEC CIK number 930667.

The selection of the TLT is not a recommendation to buy or sell the shares of the TLT. Neither we nor any of our affiliates make any representation to you as to the performance of the shares of the TLT.

“iShare®” and “BlackRock®” are registered trademarks of BFA and its affiliates. BlackRock® has licensed certain trademarks and trade names of BlackRock® for our use. The Notes are not sponsored, endorsed, sold, or promoted by BlackRock®, or by iShares®. Neither BlackRock® nor iShares® make any representations or warranties to the owners of the Notes or any member of the public regarding the advisability of investing in the Notes. Neither BlackRock® nor iShares® shall have any obligation or liability in connection with the registration, operation, marketing, trading, or sale of the Notes or in connection with our use of information about the iShares® funds.

#### General

The shares of the TLT trade on the Nasdaq Stock Market under the symbol “TLT”.

#### Investment Objective and Strategy

The TLT seeks to provide investment results that correspond generally to the price and yield performance, before fees and expenses, of the long-term sector of the United States Treasury market as defined by the ICE U.S. Treasury 20+ Year Bond Index (the “Underlying Index”).

BFA uses a “passive” or indexing approach to try to achieve the investment objective of the Underlying Index. The TLT does not try to outperform the Underlying Index and does not seek temporary defensive positions when markets decline or appear overvalued. The TLT uses a representative sampling indexing strategy (as described below under “Representative Sampling”) to try to track the Underlying Index.

The TLT may or may not hold all of the securities in the Underlying Index. The TLT generally invests at least 90% of its assets in the bonds included in the Underlying Index and at least 95% of its assets in U.S. government bonds. The TLT may invest up to 10% of its assets in U.S. government bonds not included in the Underlying Index, but which BFA believes will help the TLT track the Underlying Index. The TLT also may invest up to 5% of its assets in repurchase agreements collateralized by U.S. government obligations and in cash and cash equivalents, including shares of money market funds advised by BFA. The TLT may lend securities representing up to one-third of the value of the TLT’s total assets (including the value of the collateral received).

#### Representative Sampling

The Advisor uses a representative sampling strategy to track the Underlying Index. Representative sampling is an indexing strategy that involves investing in a representative sample of securities that collectively has an investment profile similar to the Underlying Index. The securities selected are expected to have, in the aggregate, investment characteristics (based on factors such as market capitalization and industry weightings), fundamental characteristics (such as return variability and yield) and liquidity measures similar to those of the Underlying Index. Funds may or

may not hold all of the securities that are included in the Underlying Index.

#### Correlation

The Underlying Index is a theoretical financial calculation, while the TLT is an actual investment portfolio. The performance of the TLT and the Underlying Index will vary somewhat due to transaction costs, asset valuations, corporate actions (such as mergers and spin-offs), timing variances and differences between the TLT's portfolio and the Underlying Index resulting from legal restrictions (such as diversification requirements that apply to the TLT but not to the Underlying Index) or representative sampling. A figure of 100% would indicate perfect correlation. Any correlation of less than 100% is called "tracking error." The TLT, using representative sampling, can be expected to have a greater tracking error than if it used a replication indexing strategy. "Replication" is a strategy in which a fund invests in substantially all of the securities in its Underlying Index in approximately the same proportions as in the Underlying Index.

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#### ICE U.S. Treasury 20+ Year Bond Index

We have derived all information contained in this document regarding the Underlying Index, including, without limitation, its make-up, method of calculation and changes in its components, from publicly available information. Such information reflects the policies of, and is subject to change by, Interactive Data and/or its affiliates. We make no representation or warranty as to the accuracy or completeness of such information. The Underlying Index is calculated, maintained and published by BCI. BCI is under no obligation to continue to publish, and may discontinue publication of, the Underlying Index.

The Underlying Index measures the performance of public obligations of the U.S. Treasury. The Underlying Index is market capitalization weighted, includes all publicly issued U.S. Treasury securities that meet the criteria for inclusion, and is rebalanced once a month on the last calendar day of the month. The U.S. Treasury securities included in the Underlying Index must have a remaining maturity of greater than 20 years, are rated investment grade (at least Baa3 by Moody's Investors Service, Inc. or BBB- by Standard and Poor's Financial Services, LLC) and have \$300 million or more of outstanding face value as of April 1, 2017. In addition, the securities must be denominated in U.S. dollars and must be fixed-rate. Certain special issuances, such as state and local government series bonds ("SLGs") and coupon issues that have been stripped from assets already included, are excluded from the Underlying Index.

#### Historical Information for the iShares® 20+ Year Treasury Bond ETF ("TLT")

The graph below sets forth the information relating to the historical performance of the TLT. In addition, below the graph is a table setting forth the intra-day high, intra-day low and period-end closing prices of the TLT. The information provided in this table is for the period from January 1, 2008 through May 18, 2018.

We obtained the information regarding the historical performance of the TLT 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 TLT should not be taken as an indication of its future performance, and no assurance can be given as to the Final Level of the TLT. We cannot give you assurance that the performance of the TLT will result in any positive return on your initial investment.

Period-Start Date	Period-End Date	High Intra-Day Price of the TLT (in \$)	Low Intra-Day Price of the TLT (in \$)	Period-End Closing Price of the TLT (in \$)
1/1/2008	3/31/2008	98.16	90.57	95.89
4/1/2008	6/30/2008	95.90	88.60	92.34
7/1/2008	9/30/2008	100.85	89.76	94.88
10/1/2008	12/31/2008	123.15	92.36	121.90
1/1/2009	3/31/2009	120.45	100.39	105.71
4/1/2009	6/30/2009	106.56	87.56	94.57
7/1/2009	9/30/2009	99.16	89.94	98.66
10/1/2009	12/31/2009	100.31	89.21	90.32
1/1/2010	3/31/2010	92.42	88.27	89.46
4/1/2010	6/30/2010	101.79	87.30	101.75
7/1/2010	9/30/2010	109.32	97.92	105.51
10/1/2010	12/31/2010	106.10	90.48	93.13
1/1/2011	3/31/2011	94.94	88.15	92.12
4/1/2011	6/30/2011	97.73	89.65	94.10

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7/1/2011	9/30/2011	123.86	93.37	120.80
10/1/2011	12/31/2011	125.01	109.82	121.25

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1/1/2012	3/31/2012	121.64	109.70	112.20
4/1/2012	6/30/2012	130.38	110.57	125.20
7/1/2012	9/30/2012	132.21	118.05	124.23
10/1/2012	12/31/2012	127.19	119.87	121.18
1/1/2013	3/31/2013	120.70	114.63	117.76
4/1/2013	6/30/2013	124.25	107.76	110.44
7/1/2013	9/30/2013	110.79	102.11	106.40
10/1/2013	12/31/2013	108.72	101.17	101.86
1/1/2014	3/31/2014	111.07	101.70	109.10
4/1/2014	6/30/2014	115.19	107.17	113.52
7/1/2014	9/30/2014	119.43	110.34	116.27
10/1/2014	12/31/2014	127.71	116.83	125.92
1/1/2015	3/31/2015	138.50	122.97	130.69
4/1/2015	6/30/2015	132.47	114.88	117.46
7/1/2015	9/30/2015	128.92	115.39	123.54
10/1/2015	12/31/2015	126.19	118.00	120.62
1/1/2016	3/31/2016	135.25	120.66	130.54
4/1/2016	6/30/2016	140.13	127.13	138.79
7/1/2016	9/30/2016	143.62	133.03	137.55
10/1/2016	12/31/2016	137.75	116.80	119.10
1/1/2017	3/31/2017	123.14	116.49	120.68
4/1/2017	6/30/2017	128.57	119.92	125.12
7/1/2017	9/30/2017	129.56	122.59	124.75
10/1/2017	12/31/2017	128.58	122.43	126.89
1/1/2018	3/31/2018	126.50	116.51	121.94
4/1/2018	5/18/2018	122.35	116.10	117.21

PAST PERFORMANCE IS NOT INDICATIVE OF FUTURE RESULTS.

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S&P 500® Index (“SPX”)

The SPX is intended to provide an indication of the pattern of common stock price movement. The calculation of the level of the SPX 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 Dow Jones Indices LLC (“S&P”) calculates the SPX by reference to the prices of the constituent stocks of the SPX 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.

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

Computation of the SPX

While S&P currently employs the following methodology to calculate the SPX, 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 SPX was calculated as the product of the market price per share and the number of then outstanding shares of such component stock. In March 2005, S&P began shifting the SPX halfway from a market capitalization weighted formula to a float-adjusted formula, before moving the SPX to full float adjustment on September 16, 2005. S&P’s criteria for selecting stocks for the SPX did not change with the shift to float adjustment. However, the adjustment affects each company’s weight in the SPX.

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

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

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

For each stock, an investable weight factor (“IWF”) is calculated by dividing the available float shares by the total shares outstanding. Available float shares are defined as the total shares outstanding less shares held by control holders. This calculation is subject to a 5% minimum threshold for control blocks. For example, if a company’s officers and directors hold 3% of the company’s shares, and no other control group holds 5% of the company’s shares,

S&P would assign that company an IWF of 1.00, as no control group meets the 5% threshold. However, if a company's officers and directors hold 3% of the company's shares and another control group holds 20% of the company's shares, S&P would assign an IWF of 0.77, reflecting the fact that 23% of the company's outstanding shares are considered to be held for control. As of July 31, 2017, companies with multiple share class lines are no longer eligible for inclusion in the SPX. Constituents of the SPX prior to July 31, 2017 with multiple share class lines will be grandfathered in and continue to be included in the SPX. If a constituent company of the SPX reorganizes into a multiple share class line structure, that company will remain in the SPX at the discretion of the S&P Index Committee in order to minimize turnover

The SPX is calculated using a base-weighted aggregate methodology. The level of the SPX 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

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base period of the years 1941 through 1943 has been set to an indexed level of 10. This is often indicated by the notation 1941-43 = 10. In practice, the daily calculation of the SPX is computed by dividing the total market value of the component stocks by the “index divisor.” By itself, the index divisor is an arbitrary number. However, in the context of the calculation of the SPX, it serves as a link to the original base period level of the SPX. The index divisor keeps the SPX comparable over time and is the manipulation point for all adjustments to the SPX, which is index maintenance.

#### Index Maintenance

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

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

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 S&P. “Standard & Poor®”, “S&P 500” and “S&P” are trademarks of Standard & Poor’s Financial Services LLC. These trademarks have been sublicensed for certain purposes by us. The SPX is a product of S&P and/or its affiliates and has been licensed for use by us.

The Notes are not sponsored, endorsed, sold or promoted by S&P Dow Jones Indices LLC, Standard & 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 SPX to track general market performance. S&P Dow Jones Indices’ only relationship to us with respect to the SPX is the licensing of the SPX and certain trademarks, service marks and/or trade names of S&P Dow Jones Indices and/or its third party licensors. The SPX 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 SPX. 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 SPX 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 SPX. 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 SPX 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 SPX OR WITH

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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.

Historical Information for the S&P 500<sup>®</sup> Index (“SPX”)

The graph below sets forth the information relating to the historical performance of the SPX. In addition, below the graph is a table setting forth the intra-day high, intra-day low and period-end closing levels of the SPX. The information provided in this table is for the period from January 1, 2008 through May 18, 2018.

We obtained the information regarding the historical performance of the SPX 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 SPX should not be taken as an indication of its future performance, and no assurance can be given as to the Final Level of the SPX. We cannot give you assurance that the performance of the SPX will result in any positive return on your initial investment.

Period-Start Date	Period-End Date	High Intra-Day Level of the SPX	Low Intra-Day Level of the SPX	Period-End Level of the SPX
1/1/2008	3/31/2008	1,471.77	1,256.98	1,322.70
4/1/2008	6/30/2008	1,440.24	1,272.00	1,280.00
7/1/2008	9/30/2008	1,313.15	1,106.39	1,166.36
10/1/2008	12/31/2008	1,167.03	741.02	890.64
1/1/2009	3/31/2009	943.85	666.79	797.87
4/1/2009	6/30/2009	956.23	783.32	919.32
7/1/2009	9/30/2009	1,080.15	869.32	1,057.08
10/1/2009	12/31/2009	1,130.38	1,019.95	1,126.42
1/1/2010	3/31/2010	1,180.69	1,044.50	1,169.43
4/1/2010	6/30/2010	1,219.80	1,028.33	1,030.71
7/1/2010	9/30/2010	1,157.16	1,010.91	1,141.20
10/1/2010	12/31/2010	1,262.60	1,131.87	1,257.88
1/1/2011	3/31/2011	1,344.07	1,249.05	1,325.83
4/1/2011	6/30/2011	1,370.58	1,258.07	1,320.64
7/1/2011	9/30/2011	1,356.48	1,101.54	1,131.42
10/1/2011	12/31/2011	1,292.66	1,074.77	1,257.61
1/1/2012	3/31/2012	1,419.15	1,258.86	1,408.47
4/1/2012	6/30/2012	1,422.38	1,266.74	1,362.16
7/1/2012	9/30/2012	1,474.51	1,325.41	1,440.67
10/1/2012	12/31/2012	1,470.96	1,343.35	1,426.19

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1/1/2013	3/31/2013	1,570.28	1,426.19	1,569.19
4/1/2013	6/30/2013	1,687.18	1,536.03	1,606.28
7/1/2013	9/30/2013	1,729.86	1,604.57	1,681.55
10/1/2013	12/31/2013	1,849.44	1,646.47	1,848.36
1/1/2014	3/31/2014	1,883.97	1,737.92	1,872.34

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4/1/2014	6/30/2014	1,968.17	1,814.36	1,960.23
7/1/2014	9/30/2014	2,019.26	1,904.78	1,972.29
10/1/2014	12/31/2014	2,093.55	1,820.66	2,058.90
1/1/2015	3/31/2015	2,119.59	1,980.90	2,067.89
4/1/2015	6/30/2015	2,134.72	2,048.38	2,063.11
7/1/2015	9/30/2015	2,132.82	1,867.01	1,920.03
10/1/2015	12/31/2015	2,116.48	1,893.70	2,043.94
1/1/2016	3/31/2016	2,072.21	1,810.10	2,059.74
4/1/2016	6/30/2016	2,120.55	1,991.68	2,098.86
7/1/2016	9/30/2016	2,193.81	2,074.02	2,168.27
10/1/2016	12/31/2016	2,277.53	2,083.79	2,238.83
1/1/2017	3/31/2017	2,400.98	2,245.13	2,362.72
4/1/2017	6/30/2017	2,453.82	2,328.95	2,423.41
7/1/2017	9/30/2017	2,519.44	2,407.70	2,519.36
10/1/2017	12/31/2017	2,694.97	2,520.40	2,673.61
1/1/2018	3/31/2018	2,872.87	2,532.69	2,640.87
4/1/2018	5/18/2018	2,742.10	2,553.80	2,712.97

PAST PERFORMANCE IS NOT INDICATIVE OF FUTURE RESULTS.

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

The following disclosure supplements, and to the extent inconsistent supersedes, the discussion in the product prospectus supplement dated January 11, 2016 under “Supplemental Discussion of U.S. Federal Income Tax Consequences.” The discussions below and in the accompanying product prospectus supplement do not address the tax consequences applicable to holders subject to Section 451(b) of the Code.

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 an equity 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 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 May 23, 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 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. We expect to deliver the Notes on a date that is greater than two business days following the Pricing 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 settlement arrangements to prevent a failed settlement.

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.

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 6 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.

No Prospectus (as defined in Directive 2003/71/EC, as amended (the "Prospectus Directive")) will be prepared in connection with these Notes. Accordingly, these Notes may not be offered to the public in any member state of the European Economic Area (the "EEA"), and any purchaser of these Notes who subsequently sells any of these 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

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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.

#### 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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