

ROYAL BANK OF CANADA  
 Form 424B2  
 October 06, 2017

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 Registration Statement No. 333-208507

Pricing Supplement  
 Dated October 4, 2017

To the Product \$4,042,000  
 Prospectus Supplement Geared Buffered Return Notes  
 ERN-EI-1 Dated January 12, 2016, Prospectus Linked to the S&P 500® Index,  
 Supplement Dated Due March 7, 2019  
 January 8, 2016, and Royal Bank of Canada  
 Prospectus Dated  
 January 8, 2016

Royal Bank of Canada is offering the Geared Buffered Return Notes (the “Notes”) linked to the performance of the S&P 500® Index (the “Reference Asset”). The CUSIP number for the Notes is 78013GJP1. The Notes do not pay interest. If the Final Level of the Reference Asset is greater than the Initial Level, investors will receive a 200% leveraged positive return, up to a maximum return of \$1,112 per \$1,000 in Principal Amount. If the Final Level of the Reference Asset is greater than 90.00% of the Initial Level (the “Buffer Level”), but less than the Initial Level, investors will receive the Principal Amount.

However, if the Final Level is less than the Initial Level by more than the Buffer Percentage, investors will lose 1.1111 of the principal amount of the Notes for each 1% decrease from the Initial Level to the Final Level by more than the Buffer Percentage. Accordingly, investors may lose all or substantially all of their principal amount. Any payments on the Notes are subject to our credit risk.

Issue Date: October 10, 2017

Maturity Date: March 7, 2019

The Notes will not be listed on any securities exchange.

Investing in the Notes involves a number of risks. See “Risk Factors” beginning on page S-1 of the prospectus supplement dated January 8, 2016, “Additional Risk Factors Specific to the Notes” beginning on page PS-4 of the product prospectus supplement dated January 12, 2016, and “Selected Risk Considerations” on page P-6 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 these securities or determined that this pricing supplement is truthful or complete. Any representation to the contrary is a criminal offense.

	<u>Per Note</u>	<u>Total</u>
Price to public	100.00%	\$4,042,000.00
Underwriting discounts and commissions	0.25%	\$10,105.00
Proceeds to Royal Bank of Canada	99.75%	\$4,031,895.00

The initial estimated value of the Notes as of the date of this pricing supplement is \$992.41 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 \$2.50 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 \$2.50 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.

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

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Due March 7, 2019

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.

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

Issue: Senior Global Medium-Term Notes, Series G

Underwriter: RBC Capital Markets, LLC (“RBCCM”)

Reference Asset: S&P 500® Index

Bloomberg  
Ticker: SPX

Currency: U.S. Dollars

Minimum  
Investment: \$1,000 and minimum denominations of \$1,000 in excess thereof

Pricing Date: October 4, 2017

Issue Date: October 10, 2017

CUSIP: 78013GJP1

Valuation Date: March 4, 2019

Payment at  
Maturity (if held to maturity): If, on the Valuation Date, the Final Level is greater than or equal to the Initial Level, you will receive, for each \$1,000 in principal amount of the Notes, the lesser of:

1.  $\$1,000 + [\$1,000 \times (\text{Percentage Change} \times \text{Leverage Factor})]$  and
2. Maximum Redemption Amount

If on the Valuation Date, the Final Level is greater than or equal to the Buffer Level but less than the Initial Level, you will receive \$1,000 per \$1,000 principal amount of the Notes.

If the Final Level is less than the Buffer Level, then the investor will receive, for each \$1,000 in principal amount of the Notes:

$\text{Principal Amount} + [\text{Principal Amount} \times (\text{Percentage Change} + \text{Buffer Percentage}) \times \text{Downside Multiplier}]$

This amount will be less than the principal amount, and you may lose all or substantially all of your investment in the Notes.

Percentage  
Change: The Percentage Change, expressed as a percentage, is calculated using the following formula:

$$\frac{\text{Final Level} - \text{Initial Level}}{\text{Initial Level}}$$

Initial Level

Initial Level: 2,537.74, which was the closing level of the Reference Asset on the Pricing Date.

Final Level: The closing level of the Reference Asset on the Valuation Date.

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Leverage Factor: 200%

Maximum Redemption Amount: \$1,112 per \$1,000 in Principal Amount.

Buffer Percentage: 10.00%

Buffer Level: 2,283.97, which is 90.00% of the Initial Level (rounded to two decimal places).

Downside Multiplier: 100% divided by the Buffer Level. Accordingly, the Downside Multiplier will be 1.1111.

Maturity Date: March 7, 2019, subject to extension for market and other disruptions, as described in the product prospectus supplement dated January 12, 2016.

Term: Approximately seventeen (17) months.

Principal at Risk: The Notes are NOT principal protected. You may lose all or a substantial portion of your principal amount at maturity if the Final Level is less than the Buffer Level.

Calculation Agent: RBCCM

U.S. Tax Treatment: By purchasing a Note, each holder agrees (in the absence of a change in law, an administrative determination or a judicial ruling to the contrary) to treat the Note as a pre-paid cash-settled derivative contract for U.S. federal income tax purposes. However, the U.S. federal income tax consequences of your investment in the Notes are uncertain and the Internal Revenue Service could assert that the Notes should be taxed in a manner that is different from that described in the preceding sentence. Please see the 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 12, 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, plans to 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 January 8, 2016).

Terms Incorporated in the Master Note: All of the terms appearing above the item captioned “Secondary Market” on 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 12, 2016, 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 January 8, 2016, as supplemented by the prospectus supplement dated January 8, 2016 and the product prospectus supplement dated January 12, 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.

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 12, 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-EI-1 dated January 12, 2016:

<https://www.sec.gov/Archives/edgar/data/1000275/000114036116047560/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 RETURNS

The examples set out below are included for illustration purposes only. The hypothetical Percentage Changes of the Reference Asset used to illustrate the calculation of the Payment at Maturity (rounded to two decimal places) are not estimates or forecasts of the Final Level or the level of the Reference Asset on any trading day prior to the Maturity Date. All examples are based on the Leverage Factor of 200%, the Buffer Percentage of 10.00% (the Buffer Level is 90.00% of the Initial Level), and the Downside Multiplier of 1.1111 (100% divided by 90.00%), a Maximum Redemption Amount of 111.20%, and assume that a holder purchased Notes with an aggregate principal amount of \$1,000, and that no market disruption event occurs on the Valuation Date.

Example 1—Calculation of the Payment at Maturity where the Percentage Change is positive.

Percentage Change: 5.00%

Payment at Maturity:  $\$1,000 + [\$1,000 \times (5.00\% \times 200\%)] = \$1,000 + \$100.00 = \$1,100.00$

On a \$1,000 investment, a 5% Percentage Change results in a Payment at Maturity of \$1,100.00, a 10.00% return on the Notes.

Example 2—Calculation of the Payment at Maturity where the Percentage Change is positive (and the Payment at Maturity is subject to the Maximum Redemption Amount).

Percentage Change: 10.00%

Payment at Maturity:  $\$1,000 + [\$1,000 \times (10.00\% \times 200\%)] = \$1,000 + \$200.00 = \$1,200.00$

However, the Maximum Redemption Amount is \$1,112.00

On a \$1,000 investment, a 10% Percentage Change results in a Payment at Maturity of \$1,112.00, an 11.20% return on the Notes.

Example 3—Calculation of the Payment at Maturity where the Percentage Change is negative, but the Final Level is greater than the Buffer Level.

Percentage Change: -5.00%

Payment at Maturity: \$1,000

On a \$1,000 investment, a -5% Percentage Change results in a Payment at Maturity of \$1,000, a 0.00% return on the Notes.

Example 4—Calculation of the Payment at Maturity where the Final Level is less than the Buffer Level.

Percentage Change: -20.00%

Payment at Maturity:  $\$1,000 + [\$1,000 \times (-20.00\% + 10.00\%) \times 1.1111] = \$1,000 - \$111.11 = \$888.89$

On a \$1,000 investment, a -20% Percentage Change results in a Payment at Maturity of \$888.89, a -11.111% return on the Notes.



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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 Asset. These risks are explained in more detail in the section “Addi­tional Risk Factors Specific to the Notes,” begin­ning on page PS-4 of 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 Refer­ence Asset. You will lose 1.1111% of the prin­ci­pal amount of the Notes for each 1% that the Final Level is less than the Initial Level by more than the Buffer Per­centage.

**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. 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.

**Your Potential Payment at Maturity Is Limited** – The Notes will provide less oppor­tunity to partic­ipate in the appreciation of the Refer­ence Asset than an invest­ment in a security link­ed to the Refer­ence Asset provid­ing full partic­ipation in the appreciation, because the pay­ment at maturity will not exceed the Maximum Redem­ption Amount. Accord­ingly, your return on the Notes may be less than your return would be if you made an invest­ment in a security direct­ly link­ed to the positive per­for­mance of the Refer­ence Asset.

**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 amount due on the maturity date is dependent upon Royal Bank’s ability to repay its obligations at that time. This will be the case even if the level of the Refer­ence Asset increases 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.

**You Will Not Have Any Rights to the Securities Included in the Refer­ence Asset** – As a holder of the Notes, you will not have voting rights or rights to receive cash dividends or other distributions or other rights that holders of securities included in the Refer­ence Asset would have. The Final Level will not reflect any dividends paid on the securities included in the Refer­ence Asset, and accord­ingly, any positive return on the Notes may be less than the potential positive return on those securities.

**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 level of the Refer­ence Asset, 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

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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 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 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.

Market Disruption Events and Adjustments – The payment at maturity 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 ASSET

All disclosures contained in this terms supplement regarding the Reference Asset, including, without limitation, its make up, method of calculation, and changes in its components, have been derived from publicly available sources. The information reflects the policies of, and is subject to change by, S&P Dow Jones Indices LLC (“S&P”). S&P, which owns the copyright and all other rights to the Reference Asset, has no obligation to continue to publish, and may discontinue publication of, the Reference Asset. The consequences of S&P discontinuing publication of the Reference Asset are discussed in the section of the product prospectus supplement entitled “General Terms of the Notes—Unavailability of the Level of the Reference Asset on a Valuation Date.” Neither we nor RBCCM accepts any responsibility for the calculation, maintenance or publication of the Reference Asset or any successor index.

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

S&P chooses companies for inclusion in the Reference Asset with the aim of achieving a distribution by broad industry groupings that approximates the distribution of these groupings in the common stock population of its Stock Guide Database of over 10,000 companies, which S&P uses as an assumed model for the composition of the total market. Relevant criteria employed by S&P include the viability of the particular company, the extent to which that company represents the industry group to which it is assigned, the extent to which the market price of that company’s common stock generally is responsive to changes in the affairs of the respective industry, and the market value and trading activity of the common stock of that company. S&P from time to time, in its sole discretion, may add companies to, or delete companies from, the Reference Asset to achieve the objectives stated above.

S&P calculates the Reference Asset by reference to the prices of the constituent stocks of the Reference Asset without taking account of the value of dividends paid on those stocks. As a result, the return on the Notes will not reflect the return you would realize if you actually owned the Reference Asset 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 Reference Asset. 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 Reference Asset while a second listed share class line of the same company is excluded.

#### Computation of the Reference Asset

While S&P currently employs the following methodology to calculate the Reference Asset, 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 Reference Asset 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 Reference Asset halfway from a market capitalization weighted formula to a float-adjusted formula, before moving the Reference Asset to full float adjustment on September 16, 2005. S&P’s criteria for selecting stocks for the Reference Asset did not change with the shift to float adjustment. However, the adjustment affects each company’s weight in the Reference Asset.

Under float adjustment, the share counts used in calculating the Reference Asset 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 Reference Asset. 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 depository 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 depository shares and Canadian exchangeable shares are normally part of the float unless those shares form a control block. If a company has multiple classes of stock outstanding, shares in an unlisted or non-traded class are treated as a control block.

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For each stock, an investable weight factor (“IWF”) is calculated by dividing the available float shares by the total shares outstanding. As of September 21, 2012, 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. For companies with multiple classes of stock, S&P calculates the weighted average IWF for each stock using the proportion of the total company market capitalization of each share class as weights.

The Reference Asset is calculated using a base-weighted aggregate methodology. The level of the Reference Asset reflects the total market value of all 500 component stocks relative to the base period of the years 1941 through 1943. An indexed number is used to represent the results of this calculation in order to make the level easier to use and track over time. The actual total market value of the component stocks during the base period of the years 1941 through 1943 has been set to an indexed level of 10. This is often indicated by the notation 1941-43 = 10. In practice, the daily calculation of the Reference Asset 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 Reference Asset, it serves as a link to the original base period level of the Reference Asset. The index divisor keeps the Reference Asset comparable over time and is the manipulation point for all adjustments to the Reference Asset, 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 Reference Asset, and do not require index divisor adjustments.

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

Changes in a company’s shares outstanding of 5.00% or more due to mergers, acquisitions, public offerings, tender offers, Dutch auctions, or exchange offers are made as soon as reasonably possible. Share changes due to mergers or acquisitions of publicly held companies that trade on a major exchange are implemented when the transaction occurs even if both of the companies are not in the same headline index, and regardless of the size of the change. All other changes of 5.00% or more (due to, for example, company stock repurchases, private placements, redemptions, exercise of options, warrants, conversion of preferred stock, notes, debt, equity participation units, at the market offerings, or other recapitalizations) are made weekly and are announced on Fridays for implementation after the close of trading on the following Friday. Changes of less than 5.00% are accumulated and made quarterly on the third Friday of March, June, September, and December, and are usually announced two to five days prior.

If a change in a company’s shares outstanding of 5.00% or more causes a company’s IWF to change by five percentage points or more, the IWF is updated at the same time as the share change. IWF changes resulting from partial tender offers are considered on a case-by-case basis.



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#### License Agreement

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Due March 7, 2019

#### Historical Information

The graph below sets forth the information relating to the historical performance of the Reference Asset. In addition, below the graph is a table setting forth the intra-day high, intra-day low and period-end closing levels of the Reference Asset. The information provided in this table is for the four calendar quarters of 2013, 2014, 2015, and 2016, the first three quarters of 2017, and for the period from October 1, 2017 through October 4, 2017.

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

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## S&amp;P 500® Index (“SPX”)

Period-Start Date	Period-End Date	High Intra-Day Level of the Reference Asset	Low Intra-Day Level of the Reference Asset	Period-End Closing Level of the Reference Asset
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
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	10/4/2017	2,540.53	2,520.40	2,537.74

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 12, 2016 under “Supplemental Discussion of U.S. Federal Income Tax Consequences.”

Under Section 871(m) of the Code, a “dividend equivalent” payment is treated as a dividend from sources within the United States. Such payments generally would be subject to a 30% U.S. withholding tax if paid to a non-U.S. holder. Under U.S. Treasury Department regulations, payments (including deemed payments) with respect to equity-linked instruments (“ELIs”) that are “specified ELIs” may be treated as dividend equivalents if such specified ELIs reference an interest in an “underlying security,” which is generally any interest in an entity taxable as a corporation for U.S. federal income tax purposes if a payment with respect to such interest could give rise to a U.S. source dividend. However, the IRS has issued guidance that states that the U.S. Treasury Department and the IRS intend to amend the effective dates of the U.S. Treasury Department regulations to provide that withholding on dividend equivalent payments will not apply to specified ELIs that are not delta-one instruments and that are issued before January 1, 2019. Based on our determination that the Notes are not delta-one instruments, non-U.S. holders should not be subject to withholding on dividend equivalent payments, if any, under the Notes. However, it is possible that the Notes could be treated as deemed reissued for U.S. federal income tax purposes upon the occurrence of certain events affecting the Reference Asset or the Notes (for example, upon a Reference Asset rebalancing), and following such occurrence the Notes could be treated as subject to withholding on dividend equivalent payments. Non-U.S. holders that enter, or have entered, into other transactions in respect of the Reference Asset 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 10, 2017, which is the third (3rd) business day following the Pricing Date (this settlement cycle being referred to as “T+3”). See “Plan of Distribution” in the prospectus dated January 8, 2016. For additional information as to the relationship between us and RBCCM, please see the section “Plan of Distribution-Conflicts of Interest” in the prospectus dated January 8, 2016. Under Rule 15c6-1 of the Securities Exchange Act of 1934, trades in the secondary market generally are required to settle in two business days, unless the parties to any such trade expressly agree otherwise. Accordingly, purchasers who wish to trade the Notes more than two business days prior to the original issue date will be required to specify alternative settlement 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 3 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 initially be a higher amount, reflecting the addition of the 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.

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## STRUCTURING THE NOTES

The Notes are our debt securities, the return on which is linked to the performance of the Reference Asset. 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 Asset, 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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