

ROYAL BANK OF CANADA  
 Form FWP  
 December 07, 2017

RBC Capital Markets® Filed Pursuant to Rule 433  
 Registration Statement No. 333-208507

The information in this preliminary terms supplement is not complete and may be changed.

Preliminary Terms

Supplement

Subject to Completion:

Dated December 7, 2017

Pricing Supplement \$ \_\_\_\_\_

Dated December \_\_, Geared Buffered Return Notes

2017 to the Product Linked to the S&P 500® Index,

Prospectus Supplement Due January 2, 2024

ERN-EI-1 Dated January Royal Bank of Canada

12, 2016, Prospectus

Supplement Dated

January 8, 2016, and

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 78013XBY3. The Notes do not pay interest. If the Final Level of the Reference Asset is greater than the Initial Level, investors will receive a [103.50% to 111.50%] leveraged positive return (to be determined on the Pricing Date). If the Final Level of the Reference Asset is greater than 75.00% 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 1.3333% 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: January 2, 2018

Maturity Date: January 2, 2024

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 terms 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 terms supplement is truthful or complete. Any representation to the contrary is a criminal offense.

	<u>Per Note</u>	<u>Total</u>
Price to public <sup>(1)</sup>	100.00%	\$
Underwriting discounts and commissions <sup>(1)</sup>	3.25%	\$
Proceeds to Royal Bank of Canada	96.75%	\$

<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 \$967.50 and \$1,000 per \$1,000 in principal amount.

The initial estimated value of the Notes as of the date of this terms supplement is \$940.68 per \$1,000 in principal amount, which is less than the price to public. The final pricing supplement relating to the Notes will set forth our estimate of the initial value of the Notes as of the Pricing Date, which will not be less than \$920.68 per \$1,000 in principal amount. 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.

If the Notes priced on the date of this terms supplement, RBC Capital Markets, LLC, which we refer to as RBCCM, acting as agent for Royal Bank of Canada, would receive a commission of approximately \$32.50 per \$1,000 in principal amount of the Notes and would use a portion of that commission to allow selling concessions to other dealers of up to approximately \$32.50 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 terms supplement in the initial sale of the Notes. In addition, RBCCM or another of our affiliates may use this terms 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 terms supplement is being used in a market-making transaction.

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Geared Buffered Return Notes  
Linked to the S&P 500<sup>®</sup> Index,  
Due January 2, 2024

#### SUMMARY

The information in this “Summary” section is qualified by the more detailed information set forth in this terms 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<sup>®</sup> Index

Bloomberg  
Ticker: SPX

Currency: U.S. Dollars

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

Pricing Date: December 27, 2017

Issue Date: January 2, 2018

CUSIP: 78013XBY3

Valuation Date: December 27, 2023

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:

$\$1,000 + [\$1,000 \times (\text{Percentage Change} \times \text{Leverage Factor})]$

Payment at  
Maturity  
(if held to  
maturity):

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:

Initial Level: The closing level of the Reference Asset on the Pricing Date.

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

Leverage Factor: [103.50% to 111.50%] (to be determined on the Pricing Date)

Buffer  
Percentage: 25.00%

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Buffer Level: 75.00% of the Initial Level.

Downside Multiplier: 100% divided by 75.00%. Accordingly, the Downside Multiplier will be 1.3333.

Maturity Date: January 2, 2024, subject to extension for market and other disruptions, as described in the product prospectus supplement dated January 12, 2016.

Term: Approximately six (6) years.

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 terms 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 terms supplement.

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Gearred Buffered Return Notes  
Linked to the S&P 500<sup>®</sup> Index,  
Due January 2, 2024

#### ADDITIONAL TERMS OF YOUR NOTES

You should read this terms 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 terms supplement will have the meanings given to them in the product prospectus supplement. In the event of any conflict, this terms supplement will control. The Notes vary from the terms described in the product prospectus supplement in several important ways. You should read this terms supplement carefully.

This terms 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 terms supplement, “we,” “us,” or “our” refers to Royal Bank of Canada.

Royal Bank of Canada has filed a registration statement (including a product prospectus supplement, a prospectus supplement, and a prospectus) with the SEC for the offering to which this terms supplement relates. Before you invest, you should read those documents and the other documents relating to this offering that we have filed with the SEC for more complete information about us and this offering. You may obtain these documents without cost by visiting EDGAR on the SEC website at [www.sec.gov](http://www.sec.gov). Alternatively, Royal Bank of Canada, any agent or any dealer participating in this offering will arrange to send you the product prospectus supplement, the prospectus supplement and the prospectus if you so request by calling toll-free at 1-877-688-2301.

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Geared Buffered Return Notes  
Linked to the S&P 500® Index,  
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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 Initial Level, the Final Level or the level of the Reference Asset on any trading day prior to the Maturity Date. All examples are based on a Leverage Factor of 107.50% (the midpoint of the Leverage Factor range of 103.50% to 111.50%), the Buffer Percentage of 25.00% (the Buffer Level is 75.00% of the Initial Level), and the Downside Multiplier of 1.3333 (100% divided by 75.00%), 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:  $\$1,000 + [\$1,000 \times (5.00\% \times 107.50\%)] = \$1,000 + \$53.75 = \$1,053.75$

On a \$1,000 investment, a 5% Percentage Change results in a Payment at Maturity of \$1,053.75, a 5.375% return on the Notes.

Example 2—Calculation of the Payment at Maturity where the Percentage Change is negative, but the Final Level is greater than the Buffer Level.

Percentage Change: -15.00%

Payment at Maturity: \$1,000

On a \$1,000 investment, a

-15% Percentage Change

results in a Payment at

Maturity of \$1,000, a 0.00%

return on the Notes.

Example 3—Calculation of the Payment at Maturity where the Final Level is less than the Buffer Level.

Percentage Change: -40.00%

Payment at Maturity:  $\$1,000 + [\$1,000 \times (-40.00\% + 25.00\%) \times 1.3333] = \$1,000 - \$200.00 = \$800.00$

On a \$1,000 investment, a -40% Percentage Change results in a Payment at Maturity of \$800.00, a -20.00% return on the Notes.

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Link­ed to the S&P 500® Index,  
Due Jan­u­ary 2, 2024

#### 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 1.3333% 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.

**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 Will Be Less than the Price to the Public** – The initial estimated value set forth on the cover page and that will be set forth in the final pricing sup­ple­ment for the Notes 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 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

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be less than if the internal funding rate was used. The Notes are not designed to be short-term trading instruments. Accordingly, you should be able and willing to hold your Notes to maturity.

The Initial Estimated Value of the Notes on the Cover Page and that We Will Provide in the Final Pricing Supplement Are Estimates Only, Calculated as of the Time the Terms of the Notes Are Set –The initial estimated value of the Notes will be 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 estimates are 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 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 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 depository shares and Canadian exchangeable shares are normally part of the float unless those shares form 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. 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 Reference Asset. Constituents of the Reference Asset prior to July 31, 2017 with multiple share class lines will be grandfathered in and continue to be included in the Reference Asset. If a constituent company of the Reference Asset reorganizes into a multiple share class line structure, that company will remain in the Reference Asset at the discretion of the S&P Index Committee in order to minimize turnover.

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 and IWF due to its acquisition of another public company are made as soon as reasonably possible. At S&P’s discretion, de minimis merger and acquisition share changes are accumulated and implemented with the quarterly share rebalancing.

All other changes of less than 5% are accumulated and made quarterly on the third Friday of March, June, September, and December.

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

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announced on Fridays for implementation after the close of trading the following Friday (one week later). If a 5% or more share change causes a company's IWF to change by five percentage points or more, the IWF is updated at the same time as the share change. IWF changes resulting from partial tender offers are considered on a case-by-case basis.

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Due January 2, 2024

#### License Agreement

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#### 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 and the first, second and third quarters of 2017, and for the period from October 1, 2017 through December 6, 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. S&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	12/28/2016	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	12/6/2017	2,665.19	2,520.40	2,629.27

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)

We expect that delivery of the Notes will be made against payment for the Notes on or about January 2, 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. In the initial offering of the Notes, they will be offered to investors at a purchase price equal to par, except with respect to certain accounts as indicated on the cover page of this document.

We expect that delivery of the Notes will be made against payment for the Notes on a date which is more than two business days following the Pricing Date. Under Rule 15c6-1 under the Securities Exchange Act of 1934, trades in the secondary market generally are required to settle in two business days, unless the parties to that 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 an alternate settlement cycle at the time of any such trade to prevent a failed settlement, and should consult their own advisors.

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

the Notes, the value of the Notes that may be shown on your account statement may be higher than RBCCM's estimated value of the Notes at that time. This is because the estimated value of the Notes will not include the underwriting discount and our hedging costs and profits; however, the value of the Notes shown on your account statement during that period may initially be a higher amount, reflecting the addition of RBCCM's underwriting discount and our estimated costs and profits

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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.

#### 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 is likely to reduce the initial estimated value of the Notes at the time their terms are set. Unlike the estimated value included in this terms supplement or in the final 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 reduces 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 result 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 Will Be Less than the Price to the Public” above.

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