

ROYAL BANK OF CANADA  
Form 424B2  
August 30, 2017

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

Pricing Supplement  
Dated August 28, 2017

To the Product \$1,658,000  
Prospectus Supplement Barrier Absolute Return Notes  
ERN-EI-1 Dated Linked to the S&P 500® Index,  
January 12, 2016, Due August 30, 2019  
Prospectus Supplement Royal Bank of Canada  
Dated January 8, 2016,  
and Prospectus Dated  
January 8, 2016

The Notes provide a one-for-one positive return if the level of the S&P 500® Index (the “Reference Asset”) increases from the Initial Level to the Final Level.

If the level of the Reference Asset decreases from the Initial Level to the Final Level:

if the Reference Asset does not have a closing level that is less than 78.15% of the Initial Level (the “Barrier Level”) from and excluding the Pricing Date to and including the Valuation Date, the Notes will provide a positive return equal to the percentage by which the level of the Index has decreased as of the Valuation Date;  
or

if the Reference Asset does have a closing level that is less than the Barrier Level during that period, the Notes will provide a negative return that is equal to the percentage decrease in the level of the Reference Asset.

The Notes do not pay interest, and investors may lose all or a portion of the principal amount of the Notes. Any payments on the Notes are subject to our credit risk.

The Notes will be issued on August 31, 2017, and will mature on August 30, 2019.

The Notes will not be listed on any U.S. securities exchange. The CUSIP number for the Notes is 78012K4U8.

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-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 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%	\$1,658,000.00
Underwriting discounts and commissions	0%	\$0.00
Proceeds to Royal Bank of Canada	100%	\$1,658,000.00

The initial estimated value of the Notes as of the date of this pricing supplement is \$984.74 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, did not receive a commission in connection with the sale of the Notes. See “Supplemental Plan of Distribution (Conflicts of Interest)” on page P-14 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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#### 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<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: August 28, 2017  
Issue Date: August 31, 2017  
CUSIP: 78012K4U8  
Valuation Date: August 28, 2019

Payment at Maturity (if held to maturity): If, on the Valuation Date, the Percentage Change is positive, then the investor will receive an amount per \$1,000 principal amount per Note equal to:  
Principal Amount + (Principal Amount x Percentage Change)

If, on the Valuation Date, the Percentage Change is less than or equal to zero, and a Barrier Event has not occurred, the investor will receive an amount per \$1,000 principal amount per Note equal to:  
Principal Amount + [-1 x (Principal Amount x Percentage Change)]

In this case, the return on the Notes will be positive, even though the Percentage Change is negative.

If, on the Valuation Date, the Percentage Change is less than or equal to zero, and if a Barrier Event has occurred, the investor will receive an amount per \$1,000 principal amount per Note equal to:  
Principal Amount + (Principal Amount x Percentage Change)

In this case, the payment on the Notes will be less than the principal amount, and you may lose all or a substantial portion of the principal amount.

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

Initial Level: 2,444.24, 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.

Barrier Level: 1,910.17, which is 78.15% of the Initial Level (rounded to two decimal places)

Barrier Event: A Barrier Event will be deemed to occur if the closing level of the Reference Asset on any day during the Monitoring Period is less than the Barrier Level.

Monitoring Period: Each trading day from the Pricing Date to, and including, the Valuation Date.

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Monitoring Method: Close of trading day

Maturity Date: August 30, 2019, subject to extension for market and other disruptions, as described in the product prospectus supplement dated January 12, 2016.

Term: Two (2) 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 a Barrier Event occurs, and the Final Level is less than the Initial 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 and table set out below are included for illustration purposes only. They assume that a holder purchased Notes with an aggregate principal amount of \$1,000, the Barrier Level of 78.15%, and that no market disruption events will occur. 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 the Valuation Date or on any trading day prior to the Maturity Date.

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

Percentage Change: 15%

Payment at Maturity:  $\$1,000 + (\$1,000 \times 15\%) = \$1,000 + \$150.00 = \$1,150.00$

On a \$1,000 investment, a 15% Percentage Change results in a Payment at Maturity of \$1,150.00, a 15.00% return on the Notes.

Example 2—Calculation of the Payment at Maturity where the Percentage Change is negative and a Barrier Event has not occurred.

Percentage Change: -20%

Payment at Maturity:  $\$1,000 + [(-1 \times (\$1,000 \times -20\%))] = \$1,000 + \$200.00 = \$1,200.00$

On a \$1,000 investment, if a Barrier Event has not occurred, a -20% Percentage Change results in a Payment at Maturity of \$1,200.00, a 20.00% positive return on the Notes.

Example 3—Calculation of the Payment at Maturity where the Percentage Change is negative, and a Barrier Event has occurred.

Percentage Change: -40%

Payment at Maturity:  $\$1,000 + (\$1,000 \times -40\%) = \$1,000 - \$400.00 = \$600.00$

On a \$1,000 investment, if a Barrier Event has occurred, a -40% Percentage Change results in a Payment at Maturity of \$600.00, a -40.00% return on the Notes.

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The table below illustrates the Payment at Maturity of the Notes based on a hypothetical Initial Level of 100. Hypothetical Final Levels are shown in the first column on the left. The second column shows the Payment at Maturity (as a percentage of the principal amount) in a case where the closing level of the Reference Asset does not fall below the Barrier Level on any trading day during the Monitoring Period. The third column shows the Payment at Maturity (as a percentage of the principal amount) in a case where the level of the Reference Asset does fall below the Barrier Level during the Monitoring Period.

Hypothetical Final Level	If the closing level of the Reference Asset does <u>not</u> fall below the Barrier Level on any day during the Monitoring Period: Payment at Maturity as Percentage of Principal Amount	If the closing level of the Reference Asset falls below the Barrier Level on any day during the Monitoring Period: Payment at Maturity as Percentage of Principal Amount
150.00	150.00%	150.00%
125.00	125.00%	125.00%
110.00	110.00%	110.00%
105.00	105.00%	105.00%
100.00	100.00%	100.00%
95.00	105.00%	95.00%
85.00	115.00%	85.00%
80.00	120.00%	80.00%
78.15	121.85%	78.15%
75.00	N/A	75.00%
70.00	N/A	70.00%
65.00	N/A	65.00%
50.00	N/A	50.00%
25.00	N/A	25.00%
0.00	N/A	0.00%

The Payments at Maturity shown above are entirely hypothetical; they are based on levels of the Reference Asset 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 Payments at Maturity shown above, and those amounts should not be viewed as an indication of the financial return on an investment in the Notes or on an investment in the securities represented by the Reference Asset. Please read “Additional Risk Factors Specific to Your Notes” and “Hypothetical Returns on Your Notes” in the accompanying product prospectus supplement.

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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 a Barrier Event occurs. If the closing level of the Reference Asset on any trading day during the Monitoring Period is less than the Barrier Level, and if the Percentage Change is negative, you will lose 1% of the principal amount of your Notes for each 1% that the Final Level is less than the Initial Level.

**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 Is Less than the Price to the Public -** The initial estimated value set forth on the cover page of this final 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 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 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.

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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.

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 pricing 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

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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.

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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Barrier Absolute Return Notes  
Linked to the S&P 500<sup>®</sup> Index,  
Due August 30, 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 and second quarters of 2017, and for the period from July 1, 2017 through August 28, 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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Barrier Absolute Return Notes  
 Linked to the S&P 500® Index,  
 Due August 30, 2019

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	