ROYAL BANK OF CANADA Form FWP December 31, 2018

Filed Pursuant to Rule 433 RBC Capital Markets[®] Registration Statement No. 333-227001

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

Preliminary Terms Supplement Subject to Completion: Dated December 31, 2018 Pricing Supplement \$___ Dated January ___, 2019 Buffered Enhanced Return Notes Linked to the S&P 500[®] Index, to the **Product Prospectus** Due December 31, 2020 Supplement ERN-EI-1, Royal Bank of Canada Prospectus Supplement, and Prospectus Each Dated September 7, 2018

Royal Bank of Canada is offering the Buffered Enhanced Return Notes (the "Notes") linked to the performance of the S&P 500[®] Index (the "Reference Asset").

The CUSIP number for the Notes is 78013XVG0. The Notes do not pay interest. The Notes provide a 190% leveraged positive return if the level of the Reference Asset increases from the Initial Level to the Final Level, subject to the Maximum Redemption Amount of 120% of the principal amount of the Notes. If the Final Level is less than the Initial Level by no more than 20%, investors will receive the principal amount. Investors will lose 1% of the principal amount of the Notes for each 1% decrease from the Initial Level to the Final Level of more than 20%. Any payments on the Notes are subject to our credit risk.

Issue Date: January 7, 2019

Maturity Date: December 31, 2020

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 September 7, 2018, "Additional Risk Factors Specific to the Notes" beginning on page PS-4 of the product prospectus supplement dated September 7, 2018, and "Selected Risk Considerations" beginning 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. The Notes are not subject to conversion into our common shares under subsection 39.2(2.3) of the Canada Deposit Insurance Corporation Act. Neither the Securities and Exchange Commission nor any state securities commission has approved or disapproved of 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 ⁽¹⁾	100.00%	\$
Underwriting discounts and commissions ⁽¹⁾	%	\$
Proceeds to Royal Bank of Canada	%	\$

⁽¹⁾ We or one of our affiliates may pay varying selling concessions of up to \$5 per \$1,000 in principal amount of the Notes in connection with the distribution of the notes to other registered broker dealers. See "Supplemental Plan of Distribution (Conflicts of Interest)" below. 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 \$995 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 \$948.03 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 Trade Date, which will not be less than \$928.03 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.

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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")
Underwriter:	RBC Capital Markets, LLC ("RBCCM")
Reference	•
Asset:	S&P 500 [®] Index
Bloomberg	
Ticker	SPX
Currency:	U.S. Dollars
Minimum	\$1,000 and minimum denominations of \$1,000 in excess thereof
Investment:	\$1,000 and minimum denominations of \$1,000 m excess thereof
Trade Date	
(Pricing	January 2, 2019
Date):	
Issue Date:	January 7, 2019
CUSIP:	78013XVG0
Valuation Date	: December 28, 2020
	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 the lesser of:
	1. Principal Amount + (Principal Amount x Percentage Change x Leverage Factor) and
Payment at	2. the Maximum Redemption Amount
Maturity	
(if held to	If, on the Valuation Date, the Percentage Change is less than or equal to 0% , but not by more than the
maturity):	Buffer Percentage (that is, the Percentage Change is between zero and 20%), then the investor will
	receive the principal amount only.
	If, on the Valuation Date, the Percentage Change is negative, by more than the Buffer Percentage (that is, the Percentage Change is between -20.01% and -100%), then the investor will receive a cash
	payment equal to: Principal Amount + [Principal Amount x (Percentage Change + Buffer Percentage)]
Percentage	The Percentage Change, expressed as a percentage, is calculated using the following formula:
Change:	The refeemage change, expressed as a percentage, is calculated using the following formula.
Initial Level:	The closing level of the Reference Asset on December 31, 2018.
Final Level:	The closing level of the Reference Asset on the Valuation Date.
Leverage	
Factor:	190% (subject to the Maximum Redemption Amount)
Maximum	
Redemption	120% multiplied by the principal amount
Amount:	· · · · · · · · · · · · · · · · · · ·
Buffer	0 0 <i>c</i>
Percentage:	20%
C	

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Buffer Level: 80% of the Initial Level December 31, 2020, subject to extension for market and other disruptions, as described in the product Maturity Date: prospectus supplement dated September 7, 2018. The Notes are NOT principal protected. You may lose a substantial portion of your principal amount at Principal at maturity if the Final Level is less than the Buffer Level. Risk: Calculation RBCCM Agent: By purchasing a Note, each holder agrees (in the absence of a change in law, an administrative determination or a judicial ruling to the contrary) to treat the Notes as a 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 U.S. Tax should be taxed in a manner that is different from that described in the preceding sentence. Please see Treatment: the section below, "Supplemental Discussion of U.S. Federal Income Tax Consequences," and the discussion (including the opinion of our counsel Morrison & Foerster LLP) in the product prospectus supplement dated September 7, 2018 under "Supplemental Discussion of U.S. Federal Income Tax Consequences," which apply to the Notes. RBCCM (or one of its affiliates), though not obligated to do so, may maintain a secondary market in the Secondary Notes after the Issue Date. The amount that you may receive upon sale of your Notes prior to maturity Market: may be less than the principal amount of your Notes. Listing: The Notes will not be listed on any securities exchange. 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 Settlement: dated September 7, 2018). Terms All of the terms appearing above the item captioned "Secondary Market" on pages P-2 and P-3 of this Incorporated terms supplement and the terms appearing under the caption "General Terms of the Notes" in the product in the Master prospectus supplement dated September 7, 2018, as modified by this terms supplement. Note:

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ADDITIONAL TERMS OF YOUR NOTES

You should read this terms supplement together with the prospectus dated September 7, 2018, as supplemented by the prospectus supplement dated September 7, 2018 and the product prospectus supplement dated September 7, 2018, relating to our Senior Global Medium-Term Notes, Series H, of which these Notes are a part. Capitalized terms used but not defined in this 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 September 7, 2018 and "Additional Risk Factors Specific to the Notes" in the product prospectus supplement dated September 7, 2018, as the Notes involve risks not associated with conventional debt securities. We urge you to consult your investment, legal, tax, accounting and other advisors before you invest in the Notes. You may access these documents on the Securities and Exchange Commission (the "SEC") website at www.sec.gov as follows (or if that address has changed, by reviewing our filings for the relevant date on the SEC website):

Prospectus dated September 7, 2018:

https://www.sec.gov/Archives/edgar/data/1000275/000121465918005973/196181424b3.htm Prospectus Supplement dated September 7, 2018: https://www.sec.gov/Archives/edgar/data/1000275/000121465918005975/f97180424b3.htm

Product Prospectus Supplement ERN-EI-1 dated September 7, 2018: https://www.sec.gov/Archives/edgar/data/1000275/000114036118038044/form424b5.htm

Our Central Index Key, or CIK, on the SEC website is 1000275. As used in this 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. 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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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 the Buffer Percentage of 20%, resulting in a Buffer Level of 80% of the Initial Level, the Leverage Factor of 190%, the Maximum Redemption Amount of 120% of the principal amount, 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% Payment at Maturity: $1,000 + (1,000 \times 5\% \times 190\%) = 1,000 + 1,000 + 1,000 = 1,000 + 1,000 = 1,0000 = 1,0000 = 1,000 = 1,000 = 1,000 = 1,000 =$ On a \$1,000 investment, a 5% Percentage Change results in a Payment at Maturity of \$1,095, a 9.50% return on the Notes.

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

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Percentage	25%
Change:	2.5 %
Payment at Maturity:	$1,000 + (1,000 \times 25\% \times 190\%) = 1,000 + 475 = 1,475$
	However, the Maximum Redemption Amount is \$1,200. Accordingly, you will receive a
	payment at maturity equal to \$1,200 per \$1,000 in principal amount of the Notes.
On a \$1,000 investment, a 25% Percentage Change results in a Payment at Maturity of \$1,200,	
a 20% return of	n the Notes.

Example Calculation of the Payment at Maturity where the Percentage Change is negative (but not by more than the Buffer Percentage). 3—

Percentage -8% Change: Payment at At maturity, if the Percentage Change is negative BUT not by more than the Buffer Maturity: Percentage, then the Payment at Maturity will equal the principal amount. On a \$1,000 investment, a -8% Percentage Change results in a Payment at Maturity of \$1,000, a 0% return on the Notes.

Example 4 $\frac{\text{Calculation of the Payment at Maturity where the Percentage Change is negative}}{4}$ $\overline{(by more than the Buffer Percentage)}$.

Percentage Change: -35% Payment at Maturity: $1,000 + [$1,000 \times (-35\% + 20\%)] = $1,000 - $150 = 850

On a \$1,000 investment, a -35% Percentage Change results in a Payment at Maturity of \$850, a -15% 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 a substantial portion of their principal amount if there is a decline \cdot in the level of the Reference Asset. You will lose 1% of the principal amount of the Notes for each 1% that the Final Level is less than the Initial Level by more than 20%.

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 date that the Initial Level is determined. 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

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secondary rate rather than the internal funding rate used to price the Notes and determine the initial estimated value. As a result, the secondary price will be less than if the internal funding rate was used. The Notes are not designed to be short-term trading instruments. Accordingly, you should be able and willing to hold your Notes to maturity. The Initial Estimated Value of the Notes on the Cover Page 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 Trade Date will vary based on many factors, including changes in market conditions, and cannot be predicted with accuracy. As a result, the actual value you would receive if you sold the Notes in any secondary market, if any, should be expected to differ materially from the initial estimated value of your Notes.

Inconsistent Research – Royal Bank or its affiliates may issue research reports on securities that are, or may become, components of the Reference Asset. We may also publish research from time to time on financial markets and other matters that may influence the levels of the Reference Asset or the value of the Notes, or express opinions or provide recommendations that may be inconsistent with the purchasing or holding the Notes or with the investment view implicit in the Notes or the Reference Asset. You should make your own independent investigation of the merits of investing in the Notes and the Reference Asset.

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 document 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." 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

depositary 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 officers and directors hold 3% of the company's shares and another control group holds 20% of the company's officers and directors hold 3% of the company's shares and another control group holds 20% of the company's officers and directors hold 3% of the company's shares and another control group holds 20% of the company's officers and directors hold 3% of the company's shares and another control group holds 20% of the company's officers and directors hold 3% of the company's shares and another control group holds 20% 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 total shares outstanding of 5% or more due to public offerings are made as soon as reasonably possible. Other changes of 5% or more (for example, due to tender offers, Dutch auctions, voluntary exchange offers, company stock repurchases, private placements, acquisitions of private companies or non-index companies that do not trade on a major exchange, redemptions, exercise of options, warrants, conversion of preferred stock, notes, debt, equity participations, at-the-market stock offerings or other recapitalizations) are made weekly, and are generally announced on Fridays for implementation after the close of trading the following Friday (one week later). If a 5% or more share change causes a company's IWF to change by five percentage points or more, the IWF is updated at the same time as the share change. IWF changes resulting from partial tender offers are considered on a case-by-case basis.

License Agreement

S&P[®] is a registered trademark of Standard & Poor's Financial Services LLC and Dow Jone[®] is a registered trademark of Dow Jones Trademark Holdings LLC ("Dow Jones"). These trademarks have been licensed for use by S&P. "Standard & Poor[®]s", "S&P 500" and "S&P" are trademarks of Standard & Poor's Financial Services LLC. These trademarks have been sublicensed for certain purposes by us. The Reference Asset is a product of S&P and/or its

affiliates and has been licensed for use by us.

The Notes are not sponsored, endorsed, sold or promoted by S&P Dow Jones Indices LLC, Standard & Poor's Financial Services LLC or any of their respective affiliates (collectively, "S&P Dow Jones Indices"). S&P Dow Jones Indices make no representation or warranty, express or implied, to the holders of the Notes or any member of the public regarding the advisability of investing in securities generally or in the Notes particularly or the ability of the Reference Asset to track general market

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performance. S&P Dow Jones Indices' only relationship to us with respect to the Reference Asset is the licensing of the Reference Asset and certain trademarks, service marks and/or trade names of S&P Dow Jones Indices and/or its third party licensors. The Reference Asset is determined, composed and calculated by S&P Dow Jones Indices without regard to us or the Notes. S&P Dow Jones Indices have no obligation to take our needs or the needs of holders of the Notes into consideration in determining, composing or calculating the Reference Asset. S&P Dow Jones Indices are not responsible for and have not participated in the determination of the prices, and amount of the Notes or the timing of the issuance or sale of the Notes or in the determination or calculation of the equation by which the Notes are to be converted into cash. S&P Dow Jones Indices have no obligation or liability in connection with the administration, marketing or trading of the Notes. There is no assurance that investment products based on the Reference Asset will accurately track index performance or provide positive investment returns. S&P Dow Jones Indices LLC and its subsidiaries are not investment advisors. Inclusion of a security or futures contract within an index is not a recommendation by S&P Dow Jones Indices to buy, sell, or hold such security or futures contract, nor is it considered to be investment advice. Notwithstanding the foregoing, CME Group Inc. and its affiliates may independently issue and/or sponsor financial products unrelated to the Notes currently being issued by us, but which may be similar to and competitive with the Notes. In addition, CME Group Inc. and its affiliates may trade financial products which are linked to the performance of the Reference Asset. It is possible that this trading activity will affect the value of the Notes.

S&P DOW JONES INDICES DO NOT GUARANTEE THE ADEQUACY, ACCURACY, TIMELINESS AND/OR THE COMPLETENESS OF THE REFERENCE ASSET OR ANY DATA RELATED THERETO OR ANY COMMUNICATION, INCLUDING BUT NOT LIMITED TO, ORAL OR WRITTEN COMMUNICATION (INCLUDING ELECTRONIC COMMUNICATIONS) WITH RESPECT THERETO. S&P DOW JONES INDICES SHALL NOT BE SUBJECT TO ANY DAMAGES OR LIABILITY FOR ANY ERRORS, OMISSIONS, OR DELAYS THEREIN. S&P DOW JONES INDICES MAKE NO EXPRESS OR IMPLIED WARRANTIES, AND EXPRESSLY DISCLAIMS ALL WARRANTIES, OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE OR USE OR AS TO RESULTS TO BE OBTAINED BY US, HOLDERS OF THE NOTES, OR ANY OTHER PERSON OR ENTITY FROM THE USE OF THE REFERENCE ASSET OR WITH RESPECT TO ANY DATA RELATED THERETO. WITHOUT LIMITING ANY OF THE FOREGOING, IN NO EVENT WHATSOEVER SHALL S&P DOW JONES INDICES BE LIABLE FOR ANY INDIRECT, SPECIAL, INCIDENTAL, PUNITIVE, OR CONSEQUENTIAL DAMAGES INCLUDING BUT NOT LIMITED TO, LOSS OF PROFITS, TRADING LOSSES, LOST TIME OR GOODWILL, EVEN IF THEY HAVE BEEN ADVISED OF THE POSSIBILITY OF SUCH DAMAGES, WHETHER IN CONTRACT, TORT, STRICT LIABILITY, OR OTHERWISE. THERE ARE NO THIRD PARTY BENEFICIARIES OF ANY AGREEMENTS OR ARRANGEMENTS BETWEEN S&P DOW JONES INDICES AND US, OTHER THAN THE LICENSORS OF S&P DOW JONES INDICES.

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Historical Information

The graph below sets forth the information relating to the historical performance of the Reference Asset from January 1, 2008 to December 28, 2018.

We obtained the information regarding the historical performance of the Reference Asset 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")

PAST PERFORMANCE IS NOT INDICATIVE OF FUTURE RESULTS.

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