

BANK OF NOVA SCOTIA  
 Form 424B2  
 January 29, 2019

The information in this Preliminary Pricing Supplement is not complete and may be changed. We may not sell these notes until the Pricing Supplement is delivered in final form. We are not selling these notes, nor are we soliciting offers to buy these notes, in any State where such offer or sale is not permitted.

Subject to Completion. Dated January 28, 2019

Filed Pursuant to Rule 424(b)(2)

Registration No. 333-228614

The Bank of Nova Scotia

\$ Digital Notes

Linked to the S&P 500® Index Due [ ]

The notes will not bear interest. The amount that you will be paid on your notes at maturity (expected to be the 2<sup>nd</sup> business day after the valuation date) is based on the performance of the S&P 500® Index (the reference asset) as measured from the trade date to and including the valuation date (expected to be between 23 and 26 months after the trade date). If the final level on the valuation date is equal to or greater than 85.00% of the initial level (set on the trade date), you will receive the maximum payment amount (expected to be between \$1,119.00 and \$1,140.00 for each \$1,000 principal amount of your notes). If the final level on the valuation date is less than 85.00% of the initial level, the return on your notes will be negative and you may lose your entire principal amount. Specifically, you will lose approximately 1.1765% for every 1% negative percentage change below 85.00% of the initial level. Any payment on your notes is subject to the creditworthiness of The Bank of Nova Scotia.

To determine your payment at maturity, we will first calculate the percentage change, which is the percentage increase or decrease in the final level from the initial level. At maturity, for each \$1,000 principal amount of your notes:

if the final level is equal to or greater than 85.00% of the initial level (the percentage change is equal to or greater than -15.00%), you will receive the maximum payment amount; or

if the final level is less than the initial level by more than 15.00% (the percentage change is negative and is less than -15.00%), you will receive an amount in cash equal to the sum of (i) \$1,000 plus (ii) the product of (a) \$1,000 times (b) the buffer rate of approximately 117.65% times (c) the sum of the percentage change plus 15.00%.

Following the determination of the initial level, the amount you will be paid on your notes at maturity will not be affected by the closing level of the reference asset on any day other than the valuation date. In addition, no payments on your notes will be made prior to maturity.

Investment in the notes involves certain risks. You should refer to “Additional Risks” beginning on page P-15 of this pricing supplement and “Additional Risk Factors Specific to the Notes” beginning on page PS-6 of the accompanying product prospectus supplement and “Risk Factors” beginning on page S-2 of the accompanying prospectus supplement and on page 5 of the accompanying prospectus.

The initial estimated value of your notes at the time the terms of your notes are set on the trade date is expected to be between \$960.00 and \$990.00 per \$1,000 principal amount, which will be less than the original issue price of your notes listed below. See “Additional Information Regarding Estimated Value of the Notes” on the following page and “Additional Risks” beginning on page P-15 of this document for additional information. The actual value of your notes at any time will reflect many factors and cannot be predicted with accuracy.

	Per Note Total	
Original Issue Price	100.00%	\$
Underwriting commissions	1.35%	\$
Proceeds to The Bank of Nova Scotia	98.65%	\$

NEITHER THE UNITED STATES SECURITIES AND EXCHANGE COMMISSION NOR ANY STATE SECURITIES COMMISSION HAS APPROVED OR DISAPPROVED OF THE NOTES OR PASSED UPON THE ACCURACY OR THE ADEQUACY OF THIS PRICING SUPPLEMENT, THE ACCOMPANYING PROSPECTUS, ACCOMPANYING PROSPECTUS SUPPLEMENT OR ACCOMPANYING PRODUCT PROSPECTUS SUPPLEMENT. ANY REPRESENTATION TO THE CONTRARY IS A CRIMINAL OFFENSE.

THE NOTES ARE NOT INSURED BY THE CANADA DEPOSIT INSURANCE CORPORATION PURSUANT TO THE CANADA DEPOSIT INSURANCE CORPORATION ACT (THE "CDIC ACT") OR THE U.S. FEDERAL DEPOSIT INSURANCE CORPORATION OR ANY OTHER GOVERNMENT AGENCY OF CANADA, THE UNITED STATES OR ANY OTHER JURISDICTION.

Scotia Capital (USA) Inc. Goldman Sachs & Co. LLC  
Dealer

Scotia Capital (USA) Inc.

Pricing Supplement dated February , 2019

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The Digital Notes Linked to the S&P 500<sup>®</sup> Index Due [ ] (the “notes”) offered hereunder are unsubordinated and unsecured obligations of The Bank of Nova Scotia (the “Bank”) and are subject to investment risks including possible loss of the principal amount invested due to the negative performance of the reference asset and the credit risk of The Bank of Nova Scotia. As used in this pricing supplement, the “Bank,” “we,” “us” or “our” refers to The Bank of Nova Scotia. The notes will not be listed on any U.S. securities exchange or automated quotation system.

The return on your notes will relate to the price return of the reference asset and will not include a total return or dividend component. The notes are derivative products based on the performance of the reference asset. The notes do not constitute a direct investment in any of the shares, units or other securities represented by the reference asset. By acquiring the notes, you will not have a direct economic or other interest in, claim or entitlement to, or any legal or beneficial ownership of any such share, unit or security and will not have any rights as a shareholder, unitholder or other security holder of any of the issuers including, without limitation, any voting rights or rights to receive dividends or other distributions.

Scotia Capital (USA) Inc. (“SCUSA”), our affiliate, will purchase the notes from us for distribution to other registered broker dealers or will offer the notes directly to investors. SCUSA or any of its affiliates or agents may use this pricing supplement in market-making transactions in notes after their initial sale. Unless we, SCUSA or another of our affiliates or agents selling such notes to you informs you otherwise in the confirmation of sale, this pricing supplement is being used in a market-making transaction. See “Supplemental Plan of Distribution (Conflicts of Interest)” in this pricing supplement and “Supplemental Plan of Distribution (Conflicts of Interest)” on page PS-36 of the accompanying product prospectus supplement.

The original issue price, commissions and proceeds to the Bank listed above relate to the notes we issue initially. We may decide to sell additional notes after the date of this pricing supplement, at original issue prices and with commissions and proceeds to the Bank that differ from the amounts set forth above. The return (whether positive or negative) on your investment in the notes will depend in part on the original issue price you pay for such notes.

#### Additional Information Regarding Estimated Value of the Notes

On the cover page of this pricing supplement, the Bank has provided the initial estimated value range for the notes. This range of estimated values was determined by reference to the Bank’s internal pricing models, which take into consideration certain factors, such as the Bank’s internal funding rate on the trade date and the Bank’s assumptions about market parameters. For more information about the initial estimated value, see “Additional Risks” on page P-15. The economic terms of the notes (including the maximum payment amount) are based on the Bank’s internal funding rate, which is the rate the Bank would pay to borrow funds through the issuance of similar market-linked notes, the underwriting discount and the economic terms of certain related hedging arrangements. Due to these factors, the original issue price you pay to purchase the notes will be greater than the initial estimated value of the notes. The Bank’s internal funding rate is typically lower than the rate the Bank would pay when it issues conventional fixed rate debt securities as discussed further under “Additional Risks — Neither the Bank’s nor Goldman Sachs & Co. LLC’s (“GS&Co.’s”) estimated value of the notes at any time is determined by reference to credit spreads or the borrowing rate the Bank would pay for its conventional fixed-rate debt securities”. The Bank’s use of its internal funding rate reduces the economic terms of the notes to you.

The value of your notes at any time will reflect many factors and cannot be predicted; however, the price (not including GS&Co.’s customary bid and ask spreads) at which GS&Co. would initially buy or sell notes in the secondary market (if GS&Co. makes a market, which it is not obligated to do) and the value that GS&Co. will initially use for account statements and otherwise is equal to approximately GS&Co.’s estimate of the market value of your notes on the trade date, based on its pricing models and taking into account the Bank’s internal funding rate, plus an additional amount (initially equal to \$     per \$1,000 principal amount).

Prior to     , the price (not including GS&Co.’s customary bid and ask spreads) at which GS&Co. would buy or sell your notes (if it makes a market, which it is not obligated to do) will equal approximately the sum of (a) the then-current estimated value of your notes (as determined by reference to GS&Co.’s pricing models) plus (b) any remaining additional amount (the additional amount will decline to zero on a straight-line basis from the time of pricing through approximately 3 months). On and after     , the price (not including GS&Co.’s customary bid and ask spreads) at which GS&Co. would buy or sell your notes (if it makes a market) will equal approximately the then-current estimated value of your notes determined by reference to such pricing models. For additional information

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regarding the value of your notes shown in your GS&Co. account statements and the price at which GS&Co. would buy or sell your notes (if GS&Co. makes a market, which it is not obligated to do), each based on GS&Co.'s pricing models; see "Additional Risks — The price at which GS&Co. would buy or sell your notes (if GS&Co. makes a market, which it is not obligated to do) will be based on GS&Co.'s estimated value of your notes".

We urge you to read the "Additional Risks" beginning on page P-15 of this pricing supplement.

P-2

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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 accompanying prospectus, accompanying prospectus supplement, and accompanying product prospectus supplement, each filed with the Securities and Exchange Commission (“SEC”). See “Additional Terms of Your Notes” in this pricing supplement.

Issuer: The Bank of Nova Scotia (the "Bank")

Issue: Senior Note Program, Series A

CUSIP/ISIN: 064159NE2 / US064159NE20

Type of Notes: Digital Notes

Reference Asset: The S&P 500<sup>®</sup> Index (Bloomberg Ticker: SPX)

Minimum

Investment and Denominations: \$1,000 and integral multiples of \$1,000 in excess thereof

Principal Amount: \$1,000 per note; \$[ ] in the aggregate for all the offered notes; the aggregate principal amount of the offered notes may be increased if the Bank, at its sole option, decides to sell an additional amount of the offered notes on a date subsequent to the date of this pricing supplement.

Original Issue Price: 100% of the principal amount of each note

Currency: U.S. dollars

Trade Date: [ ]

[ ] (to be determined on the trade date and expected to be the <sup>th</sup> business day after the trade date).

Original Issue Date: We expect that delivery of the notes will be made against payment therefor on or about the 5<sup>th</sup> business day following the date of pricing of the notes (this settlement cycle being referred to as “T+5”). Under Rule 15c6-1 of the Securities Exchange Act of 1934, as amended, trades in the secondary market generally are required to settle in two business days (“T+2”), unless the parties to any such trade expressly agree otherwise. Accordingly, purchasers who wish to trade the notes on or prior to the second business day after the trade date will be required, by virtue of the fact that each note initially will settle in five business days (T+5), to specify alternative settlement arrangements to prevent a failed settlement.

[ ] (to be determined on the trade date and expected to be approximately 23 to 26 months after the trade date).

Valuation Date: The valuation date could be delayed by the occurrence of a market disruption event. See “General Terms of the Notes—Market Disruption Events” beginning on page PS-20 in the accompanying product prospectus supplement. Further, if the valuation date is not a trading day, the valuation date will be postponed in the same manner as if a market disruption event has occurred.



**Maturity Date:** [ ] (to be determined on the trade date and expected to be the <sup>21</sup> business day after the valuation date), subject to adjustment due to a market disruption event, a non-trading day or a non-business day as described in more detail under “General Terms of the Notes—Maturity Date” on page PS-18 in the accompanying product prospectus supplement.

**Principal at Risk:** You may lose all or a substantial portion of your initial investment at maturity if there is a percentage decrease from the initial level to the final level of more than 15.00%.

**Purchase at amount other than principal amount:** The amount we will pay you on the maturity date for your notes will not be adjusted based on the original issue price you pay for your notes, so if you acquire notes at a premium (or discount) to the principal amount and hold them to the maturity date, it could affect your investment in a number of ways. The return on your investment in such notes will be lower (or higher) than it would have been had you purchased the notes at the principal amount. Also, if the final level is less than the threshold level, you will incur a greater percentage decrease in your investment in the notes than would have been the case if you had purchased the notes at the principal amount. Additionally, the threshold settlement amount will permit a lower (or higher) positive return than indicated below, relative to your initial investment. See “Additional Risks—If you purchase your notes at a premium to the principal amount, the return on your investment will be lower than the return on notes purchased at the principal amount and the impact of certain key terms of the notes will be negatively affected” on page P-19 of this pricing supplement.

As part of the distribution of the notes, SCUSA or one of our other affiliates will sell the notes to GS&Co. at a discount reflecting commissions of \$13.50 per \$1,000 principal amount of notes. The commissions per \$1,000 principal amount are comprised of \$2.50 of fees and \$11.00 of selling commission. See "Supplemental Plan of Distribution (Conflicts of Interest)" in this pricing supplement.

**Fees and Expenses:** The price at which you purchase the notes includes costs that the Bank or its affiliates expect to incur and profits that the Bank or its affiliates expect to realize in connection with hedging activities related to the notes, as set forth below under “Supplemental Plan of Distribution (Conflicts of Interest)”. These costs and profits will likely reduce the secondary market price, if any secondary market develops, for the notes. As a result, you may experience an immediate and substantial decline in the market value of your notes on the trade date. See “Additional Risks—Hedging activities by the Bank and GS&Co. may negatively impact investors in the notes and cause our respective interests and those of our clients and counterparties to be contrary to those of investors in the notes” in this pricing supplement.

**Payment at Maturity:** The payment at maturity, for each \$1,000 principal amount of notes, will be based on the performance of the reference asset and will be calculated as follows:

- o If the final level is equal to or greater than the threshold level, then the threshold settlement amount; or
- o If the final level is less than the threshold level, then  $\$1,000 + [\$1,000 \times \text{buffer rate} \times (\text{percentage change} + \text{threshold amount})]$

In this case you will suffer a percentage loss on your initial investment equal to the buffer rate multiplied by the negative percentage change in excess of the threshold amount. Accordingly, you could lose up to 100% of your initial investment.

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Closing Level:	As used herein, the “closing level” of the reference asset on any date will be determined based upon the closing level published on the Bloomberg page “SPX<Index>” or any successor page on Bloomberg or any successor service, as applicable, on such date.
Initial Level:	The closing level of the reference asset on the trade date.
Final Level:	The closing level of the reference asset on the valuation date. In certain special circumstances, the final level will be determined by the calculation agent, in its discretion. See “General Terms of the Notes—Unavailability of the Level of the Reference Asset on a Valuation Date” beginning on page PS-19 and “General Terms of the Notes—Market Disruption Events” beginning on page PS-20 in the accompanying product prospectus supplement.
	The percentage change, expressed as a percentage, with respect to the payment at maturity, is calculated as follows:
Percentage Change:	$\frac{\text{final level} - \text{initial level}}{\text{initial level}}$
	For the avoidance of doubt, the percentage change may be a negative value.
Threshold Level:	85.00% of the initial level
Threshold Settlement Amount:	Expected to be between \$1,119.00 and \$1,140.00 (to be determined on the trade date) for each \$1,000 principal amount of your notes.
Cap Level:	Expected to be between 111.90% and 114.00% of the initial level (to be determined on the trade date)
Maximum Payment Amount:	The Threshold Settlement Amount (to be determined on the trade date)
Threshold Amount :	15.00%
Buffer Rate:	The quotient of the initial level divided by the threshold level, which equals approximately 117.65%
Form of Notes:	Book-entry
Calculation Agent:	Scotia Capital Inc., an affiliate of the Bank
Status:	The notes will constitute direct, unsubordinated and unsecured obligations of the Bank ranking pari passu with all other direct, unsecured and unsubordinated indebtedness of the Bank from time to time outstanding (except as otherwise prescribed by law). Holders will not have the benefit of any insurance under the provisions of the CDIC Act, the U.S. Federal Deposit Insurance Act or under any other deposit insurance regime of any jurisdiction.





Tax Redemption:	The Bank (or its successor) may redeem the notes, in whole but not in part, at a redemption price determined by the calculation agent in a manner reasonably calculated to preserve your and our relative economic position, if it is determined that changes in tax laws or their interpretation will result in the Bank (or its successor) becoming obligated to pay additional amounts with respect to the notes. See “Tax Redemption” in the accompanying product prospectus supplement.
Listing:	The notes will not be listed on any securities exchange or quotation system.
Use of Proceeds:	General corporate purposes
Clearance and Settlement:	Depository Trust Company
Trading Day:	A day on which the respective principal securities markets for all of the stocks comprising the reference asset (the “reference asset constituent stocks”) are open for trading, the sponsor of the reference asset (the “sponsor”) is open for business and the reference asset is calculated and published by the sponsor
Business Day:	New York and Toronto
Terms Incorporated:	All of the terms appearing above the item under the caption “General Terms of the Notes” beginning on page PS-15 in the accompanying product prospectus supplement, as modified by this pricing supplement.
Canadian Bail-in:	The notes are not bail-inable debt securities under the CDIC Act.

INVESTING IN THE NOTES INVOLVES SIGNIFICANT RISKS. YOU MAY LOSE ALL OR A SUBSTANTIAL PORTION OF YOUR INVESTMENT. ANY PAYMENT ON THE NOTES, INCLUDING ANY REPAYMENT OF PRINCIPAL, IS SUBJECT TO THE CREDITWORTHINESS OF THE BANK. IF THE BANK WERE TO DEFAULT ON ITS PAYMENT OBLIGATIONS YOU MAY NOT RECEIVE ANY AMOUNTS OWED TO YOU UNDER THE NOTES AND YOU COULD LOSE YOUR ENTIRE INVESTMENT.

#### ADDITIONAL TERMS OF YOUR NOTES

You should read this pricing supplement together with the prospectus dated December 26, 2018, as supplemented by the prospectus supplement dated December 26, 2018 and the product prospectus supplement (Equity Linked Index Notes, Series A) dated December 26, 2018, relating to our Senior Note Program, Series A, 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 between this pricing supplement and any of the foregoing, the following hierarchy will govern: first, this pricing supplement; second, the accompanying product prospectus supplement; third, the prospectus supplement; and last, the prospectus. The notes may vary from the terms described in the accompanying prospectus, accompanying prospectus supplement and accompanying product prospectus supplement in several important ways. You should read this pricing supplement carefully, including the documents incorporated by reference herein.

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 “Additional Risk Factors Specific to the Notes” in the accompanying product prospectus supplement, 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 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).

Product Prospectus Supplement (Equity Linked Index Notes, Series A) dated December 26, 2018:

<http://www.sec.gov/Archives/edgar/data/9631/000091412118002483/bn50682441-424b2.htm>

Prospectus Supplement dated December 26, 2018:

<http://www.sec.gov/Archives/edgar/data/9631/000091412118002473/bn50676984-424b3.htm>

Prospectus dated December 26, 2018:

<http://www.sec.gov/Archives/edgar/data/9631/000119312518357537/d677731d424b3.htm>

## INVESTOR SUITABILITY

The notes may be suitable for you if:

You fully understand the risks inherent in an investment in the notes, including the risk of losing all or a substantial portion of your initial investment.

You can tolerate a loss of up to 100% of your initial investment.

You are willing to make an investment that, if the final level of the reference asset is less than the threshold level, has an accelerated downside risk greater than the downside market risk of an investment in the reference asset or in the reference asset constituent stocks.

You believe that the final level of the reference asset will be equal to or greater than the threshold level and that the appreciation of the level of the reference asset is unlikely to exceed the cap on appreciation within the maximum payment amount (the actual maximum payment amount will be determined on the trade date).

You are willing to hold the notes to maturity, a term of approximately 23 to 26 months, and accept that there may be little or no secondary market for the notes.

You understand and accept that your potential payment at maturity is limited to the maximum payment amount and you would be willing to invest in the notes if the maximum payment amount was set equal to the bottom of the range indicated on the cover hereof (the actual maximum payment amount will be set on the trade date).

You can tolerate fluctuations in the price of the notes prior to maturity that may be similar to or exceed the downside fluctuations in the level of the reference asset or in the price of its reference asset constituent stocks.

You do not seek current income from your investment.

You are willing to assume the credit risk of the Bank for all payments under the notes, and understand that if the Bank defaults on its obligations you may not receive any amounts due to you including any repayment of principal.

The notes may not be suitable for you if:

You do not fully understand the risks inherent in an investment in the notes, including the risk of losing all or a substantial portion of your initial investment.

You require an investment designed to guarantee a full return of principal at maturity.

You cannot tolerate a loss of all or a substantial portion of your initial investment.

You are not willing to make an investment that, if the final level of the reference asset is less than the threshold level, has an accelerated downside risk greater than the downside market risk of an investment in the reference asset or in the reference asset constituent stocks.

You believe that the final level of the reference asset will be less than the threshold level, or you believe the level of the reference asset will appreciate over the term of the notes and that the appreciation is likely to equal or exceed the cap on appreciation within the maximum payment amount (the actual maximum payment amount will be determined on the trade date).

You seek an investment that has unlimited return potential without a cap on appreciation or you would be unwilling to invest in the notes if the maximum payment amount was set equal to the bottom of the range indicated on the cover hereof (the actual maximum payment amount will be set on the trade date).

You cannot tolerate fluctuations in the price of the notes prior to maturity that may be similar to or exceed the downside fluctuations in the level of the reference asset or in the price of its reference asset constituent stocks.

You seek current income from your investment or prefer to receive dividends paid on the reference asset constituent stocks.

You are unable or unwilling to hold the notes to maturity, a term of approximately 23 to 26 months, or you seek an investment for which there will be a secondary market.

P-8

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• You are not willing to assume the credit risk of the Bank for all payments under the notes.

The investor suitability considerations identified above are not exhaustive. Whether or not the notes are a suitable investment for you will depend on your individual circumstances and you should reach an investment decision only after you and your investment, legal, tax, accounting and other advisors have carefully considered the suitability of an investment in the notes in light of your particular circumstances. You should also review “Additional Risks” in this pricing supplement and the “Additional Risk Factors Specific to the Notes” beginning on page PS-6 of the accompanying product prospectus supplement and "Risk Factors" beginning on page S-2 of the accompanying prospectus supplement and on page 5 of the accompanying prospectus for risks related to an investment in the notes.

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P-9

## HYPOTHETICAL PAYMENTS AT MATURITY ON THE NOTES

The examples set out below are included for illustration purposes only. They should not be taken as an indication or prediction of future investment results and are intended merely to illustrate the impact that the various hypothetical reference asset levels on the valuation date could have on the payment at maturity assuming all other variables remain constant.

The examples below are based on a range of final levels that are entirely hypothetical; the level of the reference asset on any day throughout the life of the notes, including the final level on the valuation date, cannot be predicted. The reference asset has been highly volatile in the past, meaning that the level of the reference asset has changed considerably in relatively short periods, and its performance cannot be predicted for any future period.

The information in the following examples reflects hypothetical rates of return on the offered notes assuming that they are purchased on the original issue date at the principal amount and held to the maturity date. If you sell your notes in a secondary market prior to the maturity date, your return will depend upon the market value of your notes at the time of sale, which may be affected by a number of factors that are not reflected in the examples below, such as interest rates, the volatility of the reference asset and our creditworthiness. In addition, the estimated value of your notes at the time the terms of your notes were set on the trade date (as determined by reference to pricing models used by us) is less than the original issue price of your notes. For more information on the estimated value of your notes, see “Additional Risks—The Bank’s initial estimated value of the notes at the time of pricing (when the terms of your notes are set on the trade date) will be lower than the original issue price of the notes” on page P-15 of this pricing supplement. The information in the examples also reflect the key terms and assumptions in the box below.

## Key Terms and Assumptions

Principal amount	\$1,000
Threshold settlement amount	\$1,119.00*
Threshold level	85.00% of the initial level
Cap level	111.90% of the initial level
Threshold amount	15.00%
Buffer rate	approximately 117.65%

\*The threshold settlement amount has a range of \$1,119.00 - \$1,140.00. The actual threshold settlement amount will be determined on the trade date.

Neither a market disruption event nor a non-trading day occurs on the originally scheduled valuation date

No change in or affecting any of the reference asset constituent stocks or the method by which the sponsor calculates the reference asset

Notes purchased on the original issue date at the principal amount and held to the maturity date

Moreover, we have not yet set the initial level that will serve as the baseline for determining the percentage change or the threshold settlement amount, each of which will affect the amount that we will pay on your notes, if any, at maturity. We will not do so until the trade date. As a result, the actual initial level may differ substantially from the level of the reference asset prior to the trade date.

For these reasons, the actual performance of the reference asset over the life of your notes, as well as the amount payable at maturity, if any, may bear little relation to the hypothetical examples shown below or to the historical levels

of the reference asset shown elsewhere in this pricing supplement. For information about the historical levels of the reference asset, see “Information Regarding the Reference Asset—Historical Information” below. Before investing in the offered notes, you should consult publicly available information to determine the levels of the reference asset between the date of this pricing supplement and the date of your purchase of the offered notes.

Also, the hypothetical examples shown below do not take into account the effects of applicable taxes. Because of the U.S. tax treatment applicable to your notes, tax liabilities could affect the after-tax rate of return on your notes to a comparatively greater extent than the after-tax return on the reference asset constituent stocks.

P-10

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The levels in the left column of the table below represent hypothetical final levels and are expressed as percentages of the initial level. The amounts in the right column represent the hypothetical payment at maturity, based on the corresponding hypothetical final level, and are expressed as percentages of the principal amount of a note (rounded to the nearest one-thousandth of a percent). Thus, a hypothetical payment at maturity of 100.000% means that the value of the cash payment that we would pay for each \$1,000 of the outstanding principal amount of the offered notes on the maturity date would equal 100.000% of the principal amount of a note, based on the corresponding hypothetical final level and the assumptions noted above.

Hypothetical Final Level (as Percentage of Initial Level)	Hypothetical Payment at Maturity (as Percentage of Principal Amount)
150.000%	111.900%
140.000%	111.900%
130.000%	111.900%
120.000%	111.900%
110.000%	111.900%
100.000%	111.900%
90.000%	111.900%
85.000%	111.900%
84.999%	99.999%
80.000%	94.118%
75.000%	88.235%
50.000%	58.824%
25.000%	29.412%
0.000%	0.000%

If, for example, the final level were determined to be 25.000% of the initial level, the payment at maturity that we would pay on your notes at maturity would be approximately 29.412% of the principal amount of your notes, as shown in the table above. As a result, if you purchased your notes on the original issue date at the principal amount and held them to the maturity date, you would lose approximately 70.588% of your investment (if you purchased your notes at a premium to the principal amount you would lose a correspondingly higher percentage of your investment). If the final level were determined to be 0.000% of the initial level, you would lose 100.000% of your investment in the notes. In addition, if the final level were determined to be 150.000% of the initial level, the payment at maturity that we would pay on your notes would be limited to the maximum payment amount, for a payment at maturity equal to 111.900% of each \$1,000 principal amount of your notes, as shown in the table above. As a result, if you held your notes to the maturity date, you would not benefit from any increase in the final level of greater than 85.000% of the initial level.

The following chart shows a graphical illustration of the hypothetical payment at maturity that we would pay on your notes on the maturity date, if the final level were any of the hypothetical levels shown on the horizontal axis. The hypothetical payments at maturity in the chart are expressed as percentages of the principal amount of your notes and the hypothetical final levels are expressed as percentages of the initial level. The chart shows that any hypothetical final level of less than 85.000% (the section left of the 85.000% marker on the horizontal axis) would result in a hypothetical payment at maturity of less than 100.00% of the principal amount of your notes (the section below the 100.00% marker on the vertical axis) and, accordingly, in a loss of principal to the holder of the notes. The chart also shows that any hypothetical final level of greater than or equal to 85.000% (the section right of the 85.000% marker on the horizontal axis) would result in a capped return on your investment.

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The following examples illustrate the calculation of the payment at maturity based on the key terms and assumptions above. The amounts below have been rounded for ease of analysis.

Example 1— Calculation of the payment at maturity where the percentage change is positive (and the final level is greater than the cap level).

Percentage Change: 50.00%

Payment at Maturity: \$1,119.00

On a \$1,000.00 investment, a 50.00% percentage change results in a payment at maturity of the threshold settlement amount, equal to \$1,119.00.

Example 2— Calculation of the payment at maturity where the percentage change is positive (and the final level is less than the cap level).

Percentage Change: 5.00%

Payment at Maturity: \$1,119.00

On a \$1,000.00 investment, a 5.00% percentage change results in a payment at maturity of the threshold settlement amount, equal to \$1,119.00.

Example 3— Calculation of the payment at maturity where the percentage change is negative but is equal to or greater than -15.00%.

Percentage Change: -5.00%

Payment at Maturity: \$1,119.00

On a \$1,000.00 investment, a -5.00% percentage change results in a payment at maturity of the threshold settlement amount, equal to \$1,119.00.

Example 4— Calculation of the payment at maturity where the percentage change is negative and is less than -15.00%.

Percentage Change: -50.00%

Payment at Maturity:  $\$1,000.00 + [\$1,000.00 \times 117.65\% \times (-50.00\% + 15.00\%)] =$   
 $\$1,000.00 - \$411.76 = \$588.24$

On a \$1,000.00 investment, a -50.00% percentage change results in a payment at maturity of approximately \$588.24.

**Accordingly, if the percentage change is less than -15.00%, the Bank will pay you less than the full principal amount, resulting in a percentage loss on your investment that is equal to the buffer rate multiplied by the negative percentage change in excess of the threshold amount. You may lose up to 100% of your principal amount.**

Any payment on the notes, including any repayment of principal, is subject to the creditworthiness of the Bank. If the Bank were to default on its payment obligations, you may not receive any amounts owed to you under the notes and you could lose your entire investment.

The payments at maturity shown above are entirely hypothetical; they are based on a hypothetical threshold settlement amount, hypothetical 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 these amounts should not be viewed as an indication of the financial return on an investment in the offered notes. The hypothetical payments at maturity on the notes held to the maturity date in the examples above assume you purchased your notes at their principal amount and have not been adjusted to reflect the actual original issue price you pay for your notes. The return on your investment (whether positive or negative) in your notes will be affected by the amount you pay for your notes. If you purchase your notes for a price other than the principal amount, the return on your investment will differ from, and may be significantly lower than, the hypothetical returns suggested by the above examples. Please read “Additional Risks—The price at which the notes may be sold prior to maturity will depend on a number of factors and may be substantially less than the amount for which they were originally purchased” on page P-19 of this pricing supplement.

Payments on the notes are economically equivalent to the amounts that would be paid on a combination of other instruments. For example, payments on the notes are economically equivalent to a combination of a non-interest-bearing bond bought by the holder and one or more options entered into between the holder and us (with one or more implicit option premiums paid over time). The discussion in this paragraph does not modify or affect the terms of the notes or the U.S. federal income tax treatment of the notes, as described elsewhere in this pricing supplement.

We cannot predict the actual final level or what the market value of your notes will be on any particular trading day, nor can we predict the relationship between the level of the reference asset and the market value of your notes at any time prior to the maturity date. The actual amount that you will receive, if any, at maturity and the rate of return on the offered notes will depend on the actual initial level, threshold settlement amount and maximum payment amount, which we will set on the trade date, and the actual final level to be determined by the calculation agent as described above. Moreover, the assumptions on which the hypothetical returns are based may turn out to be inaccurate. Consequently, the amount of cash to be paid in respect of your notes, if any, on the maturity date may be very different from the information reflected in the examples above.

## ADDITIONAL RISKS

An investment in the notes involves significant risks. In addition to the following risks included in this pricing supplement, we urge you to read “Additional Risk Factors Specific to the Notes” beginning on page PS-6 of the accompanying product prospectus supplement and “Risk Factors” beginning on page S-2 of the accompanying prospectus supplement and page 5 of the accompanying prospectus.

You should understand the risks of investing in the notes and should reach an investment decision only after careful consideration, with your advisors, of the suitability of the notes in light of your particular financial circumstances and the information set forth in this pricing supplement and the accompanying prospectus, accompanying prospectus supplement and accompanying product prospectus supplement.

The Bank’s initial estimated value of the notes at the time of pricing (when the terms of your notes are set on the trade date) will be lower than the original issue price of the notes

The Bank’s initial estimated value of the notes is only an estimate. The original issue price of the notes will exceed the Bank’s initial estimated value. The difference between the original issue price of the notes and the Bank’s initial estimated value reflects costs associated with selling and structuring the notes, as well as hedging its obligations under the notes with a third party.

Neither the Bank’s nor GS&Co.’s estimated value of the notes at any time is determined by reference to credit spreads or the borrowing rate the Bank would pay for its conventional fixed-rate debt securities

The Bank’s initial estimated value of the notes and GS&Co.’s estimated value of the notes at any time are determined by reference to the Bank’s internal funding rate. The internal funding rate used in the determination of the estimated value of the notes generally represents a discount from the credit spreads for the Bank’s conventional fixed-rate debt securities and the borrowing rate the Bank would pay for its conventional fixed-rate debt securities. This discount is based on, among other things, the Bank’s view of the funding value of the notes as well as the higher issuance, operational and ongoing liability management costs of the notes in comparison to those costs for the Bank’s conventional fixed-rate debt. If the interest rate implied by the credit spreads for the Bank’s conventional fixed-rate debt securities, or the borrowing rate the Bank would pay for its conventional fixed-rate debt securities were to be used, the Bank would expect the economic terms of the notes to be more favorable to you. Consequently, the use of an internal funding rate for the notes increases the estimated value of the notes at any time and has an adverse effect on the economic terms of the notes.

The Bank’s initial estimated value of the notes does not represent future values of the notes and may differ from others’ (including GS&Co.’s) estimates

The Bank’s initial estimated value of the notes is determined by reference to its internal pricing models when the terms of the notes are set. These pricing models consider certain factors, such as the Bank’s internal funding rate on the trade date, the expected term of the notes, market conditions and other relevant factors existing at that time, and the Bank’s assumptions about market parameters, which can include volatility, dividend rates, interest rates and other factors. Different pricing models and assumptions (including the pricing models and assumptions used by GS&Co.) could provide valuations for the notes that are different, and perhaps materially lower, from the Bank’s initial estimated value. Therefore, the price at which GS&Co. would buy or sell your notes (if GS&Co. makes a market, which it is not obligated to do) may be materially lower than the Bank’s initial estimated value. In addition, market conditions and other relevant factors in the future may change, and any assumptions may prove to be incorrect.

The price at which GS&Co. would buy or sell your notes (if GS&Co. makes a market, which it is not obligated to do) will be based on GS&Co.’s estimated value of your notes

GS&Co.’s estimated value of the notes is determined by reference to its pricing models and takes into account the Bank’s internal funding rate. The price at which GS&Co. would initially buy or sell your notes in the secondary market (if GS&Co. makes a market, which it is not obligated to do) exceeds GS&Co.’s estimated value of your notes at the time of pricing. As agreed by GS&Co. and the distribution participants, this excess (i.e., the additional amount described under “Additional Information Regarding Estimated Value of the Notes” above) will decline to zero on a straight line basis over the period from the trade date through the applicable date set forth above under “Additional Information Regarding Estimated Value of the Notes” above. Thereafter, if GS&Co. buys or sells your notes it will do so at prices that reflect the estimated value determined by reference to GS&Co.’s pricing models at that time. The price

at which GS&Co. will buy or sell your notes at any time also will reflect its then current bid and ask spread for similar sized trades of structured notes. If GS&Co. calculated its estimated  
P-15

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value of your notes by reference to the Bank's credit spreads or the borrowing rate the Bank would pay for its conventional fixed-rate debt securities (as opposed to the Bank's internal funding rate), the price at which GS&Co. would buy or sell your notes (if GS&Co. makes a market, which it is not obligated to do) could be significantly lower. GS&Co.'s pricing models consider certain variables, including principally the Bank's internal funding rate, interest rates (forecasted, current and historical rates), volatility, price-sensitivity analysis and the time to maturity of the notes. These pricing models are proprietary and rely in part on certain assumptions about future events, which may prove to be incorrect. As a result, the actual value you would receive if you sold your notes in the secondary market, if any, to others may differ, perhaps materially, from the estimated value of your notes determined by reference to GS&Co.'s models, taking into account the Bank's internal funding rate, due to, among other things, any differences in pricing models or assumptions used by others. See "The price at which the notes may be sold prior to maturity will depend on a number of factors and may be substantially less than the amount for which they were originally purchased" below.

In addition to the factors discussed above, the value and quoted price of your notes at any time will reflect many factors and cannot be predicted. If GS&Co. makes a market in the notes, the price quoted by GS&Co. would reflect any changes in market conditions and other relevant factors, including any deterioration in the Bank's creditworthiness or perceived creditworthiness. These changes may adversely affect the value of your notes, including the price you may receive for your notes in any market making transaction. To the extent that GS&Co. makes a market in the notes, the quoted price will reflect the estimated value determined by reference to GS&Co.'s pricing models at that time, plus or minus GS&Co.'s then current bid and ask spread for similar sized trades of structured notes (and subject to the declining excess amount described above).

Furthermore, if you sell your notes, you will likely be charged a commission for secondary market transactions, or the price will likely reflect a dealer discount. This commission or discount will further reduce the proceeds you would receive for your notes in a secondary market sale.

There is no assurance that GS&Co. or any other party will be willing to purchase your notes at any price and, in this regard, GS&Co. is not obligated to make a market in the notes. See "The notes lack liquidity" below.

#### Risk of loss at maturity

You may lose your entire investment in the notes. Any payment on the notes at maturity depends on the percentage change of the reference asset. The Bank will only repay you the full principal amount of your notes if the percentage change is equal to or greater than -15.00%. If the percentage change is less than -15.00%, you will have a loss for each \$1,000 principal amount of your notes equal to the product of (i) the buffer rate times (ii) the sum of the percentage change plus the threshold amount times (iii) \$1,000. Accordingly, you may lose your entire investment in the notes if the percentage decline from the initial level to the final level is greater than 15.00%.

The downside market exposure to the reference asset is buffered only at maturity

You should be willing to hold your notes to maturity. If you are able to sell your notes prior to maturity in the secondary market, you may have to sell them at a loss relative to your initial investment even if the level of the reference asset at such time is equal to or greater than the threshold level.

Your potential payment at maturity is limited to the maximum payment amount

The payment at maturity will not exceed the maximum payment amount. Therefore, if the appreciation of the level of the reference asset exceeds the cap on appreciation in the maximum payment amount, the notes will provide less opportunity to participate in the appreciation of the reference asset than an investment in a security linked to the level of the reference asset providing full participation in the appreciation. Accordingly, the return on the notes may be less than the return would be if you made an investment in a security directly linked to the positive performance of the reference asset.

The notes differ from conventional debt instruments

The notes are not conventional notes or debt instruments. The notes do not provide you with interest payments prior to maturity as a conventional fixed-rate or floating-rate debt security with the same maturity would. 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 the Bank.

No interest



The notes will not bear interest and, accordingly, you will not receive any interest payments on the notes.  
P-16

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Your investment is subject to the credit risk of The Bank of Nova Scotia

The notes are senior unsecured debt obligations of the Bank, and are not, either directly or indirectly, an obligation of any third party. As further described in the accompanying prospectus, accompanying prospectus supplement and accompanying product prospectus supplement, the notes will rank on par with all of the other unsecured and unsubordinated debt obligations of the Bank, except such obligations as may be preferred by operation of law. Any payment to be made on the notes, including the payment at maturity, depends on the ability of the Bank to satisfy its obligations as they come due. As a result, the actual and perceived creditworthiness of the Bank may affect the market value of the notes and, in the event the Bank were to default on its obligations, you may not receive the amounts owed to you under the terms of the notes. If you sell the notes prior to maturity, you may receive substantially less than the principal amount of your notes.

There are potential conflicts of interest between you and the calculation agent

Scotia Capital Inc., the calculation agent, is one of our affiliates. In performing its duties, the economic interests of the calculation agent are potentially adverse to your interests as an investor in the notes. The calculation agent is under no obligation to consider your interests as a holder of the notes in taking any actions that might affect the level of the reference asset and the value of, and amount payable on, the notes.

Investors should investigate the reference asset and the reference asset constituent stocks as if making a hypothetical direct investment in the reference asset constituent stocks

Investors should conduct their own diligence of the reference asset and reference asset constituent stocks as an investor would if it were making a hypothetical direct investment in the reference asset constituent stocks. Neither we nor any of our affiliates have participated in the preparation of any publicly available information or made any “due diligence” investigation or inquiry with respect to the reference asset or the reference asset constituent stocks.

Furthermore, we cannot give any assurance that all events occurring prior to the original issue date have been properly disclosed. Subsequent disclosure of any such events or the disclosure or failure to disclose material future events concerning the reference asset or the reference asset constituent stocks could affect any payment at maturity. Investors should not conclude that the sale by the Bank of the notes is any form of investment recommendation by the Bank or any of its affiliates to invest in securities linked to the performance of the reference asset or the reference asset constituent stocks.

The notes are subject to market risk

The return on the notes is directly linked to the performance of the reference asset and indirectly linked to the performance of the reference asset constituent stocks, and the extent to which the percentage change is positive or negative. The level of the reference asset can rise or fall sharply due to factors specific to the reference asset constituent stocks, as well as general market factors, such as general market volatility and levels, interest rates and economic and political conditions.

The threshold settlement amount applies only at maturity

You should be willing to hold your notes to maturity. If you are able to sell your notes prior to maturity in the secondary market, the price you receive per \$1,000 principal amount will likely not reflect the full economic value of the threshold settlement amount or the notes themselves, and the return you realize may be less than the percentage change multiplied by the principal amount even if such return is positive. You may receive the full benefit of the threshold settlement amount only if you hold your notes to maturity.

The payment at maturity is not linked to the level of the reference asset at any time other than the valuation date (except in the case of tax redemptions)

The payment at maturity will be based on the final level. Therefore, for example, if the closing level of the reference asset declined substantially as of the valuation date compared to the trade date, the payment at maturity may be significantly less than it would otherwise have been had the payment at maturity been linked to the closing levels of the reference asset prior to the valuation date. Although the actual level of the reference asset at maturity or at other times during the term of the notes may be higher than the final level, you will not benefit from the closing levels of the reference asset at any time other than the valuation date (except in the case of tax redemptions as described further under “Tax Redemption” in the accompanying product prospectus supplement).

If the levels of the reference asset or the reference asset constituent stocks change, the market value of your notes may not change in the same manner

Your notes may trade quite differently from the performance of the reference asset or the reference asset constituent stocks. Changes in the levels of the reference asset or the reference asset constituent stocks may not result in a comparable change in the market value of your notes. We discuss some of the reasons for this disparity under “—The price at which the notes may be sold prior to maturity will depend on a number of factors and may be substantially less than the amount for which they were originally purchased” below.

Holding the notes is not the same as holding the reference asset constituent stocks

Holding the notes is not the same as holding the reference asset constituent stocks. As a holder of the notes, you will not be entitled to the voting rights or rights to receive dividends or other distributions or other rights that holders of the reference asset constituent stocks would enjoy. Further, the return on your notes may not reflect the return you would realize if you actually owned the reference asset constituent stocks. For instance, your potential payment at maturity is limited to the maximum payment amount and you will not participate in the appreciation of the reference asset or the reference asset constituent stocks.

There is no assurance that the investment view implicit in the notes will be successful

It is impossible to predict with certainty whether and the extent to which the level of the reference asset will rise or fall. There can be no assurance that the level of the reference asset will rise above the initial level or that the percentage decline from the initial level to the final level will not be greater than the threshold amount. The final level may be influenced by complex and interrelated political, economic, financial and other factors that affect the level of the reference asset constituent stocks. You should be willing to accept the risks of the price performance of equity securities in general and the reference asset constituent stocks in particular, and the risk of losing some or all of your initial investment.

Furthermore, we cannot give you any assurance that the future performance of the reference asset or the reference asset constituent stocks will result in your receiving an amount greater than or equal to the principal amount of your notes. Certain periods of historical performance of the reference asset or the reference asset constituent stocks would have resulted in you receiving less than the principal amount of your notes if you had owned notes with terms similar to these notes in the past. See “Information Regarding The Reference Asset” in this pricing supplement for further information regarding the historical performance of the reference asset.

There is no assurance as to the performance of the reference asset or the reference asset constituent stocks; past performance of the reference asset or the reference asset constituent stocks should not be taken as an indication of the future performance of the reference asset or the reference asset constituent stocks

The notes are linked directly to the level of the reference asset and indirectly to the levels of the reference asset constituent stocks, which are speculative and involve a high degree of risk. None of the Bank, the calculation agent or GS&Co., or any affiliate of the Bank, the calculation agent or GS&Co. gives any assurance as to the performance of the reference asset or the reference asset constituent stocks. Investors should not conclude that the sale by the Bank of the notes is an investment recommendation by it or by any of the other entities mentioned above to invest in securities linked to the performance of the reference asset or the reference asset constituent stocks. Investors should consult with their own financial advisors as to whether an investment in the notes is appropriate for them. Past performance of the reference asset and the reference asset constituent stocks should not be taken as a guarantee or assurance of the future performance of the reference asset or the reference asset constituent stocks, and it is impossible to predict whether the level of the reference asset or the reference asset constituent stocks will rise or fall during the term of the notes.

The reference asset reflects price return only and not total return

The return on your notes is based on the performance of the reference asset, which reflects the changes in the market prices of the reference asset constituent stocks. It is not, however, linked to a “total return” index or strategy, which, in addition to reflecting those price returns, would also reflect dividends paid on the reference asset constituent stocks. The return on your notes will not include such a total return feature or dividend component.

We may sell an additional aggregate principal amount of the notes at a different issue price

We may decide to sell an additional aggregate principal amount of the notes subsequent to the date of this pricing supplement. The issue price of the notes in the subsequent sale may differ substantially (higher or lower) from the original issue price you paid as provided on the cover of this pricing supplement.



Changes affecting the reference asset could have an adverse effect on the value of the notes

The policies of S&P Dow Jones Indices LLC, the sponsor of the reference asset (the "sponsor"), concerning additions, deletions and substitutions of the reference asset constituent stocks and the manner in which the sponsor takes account of certain changes affecting those reference asset constituent stocks may adversely affect the level of the reference asset. The policies of the sponsor with respect to the calculation of the reference asset could also adversely affect the level of the reference asset. The sponsor may discontinue or suspend calculation or dissemination of the reference asset. Any such actions could have a material adverse effect on the value of the notes.

The Bank cannot control actions by the sponsor and the sponsor has no obligation to consider your interests

The Bank and its affiliates are not affiliated with the sponsor and have no ability to control or predict its actions, including any errors in or discontinuation of public disclosure regarding methods or policies relating to the calculation of the reference asset. The sponsor is not involved in the notes offering in any way and has no obligation to consider your interest as an owner of the notes in taking any actions that might negatively affect the market value of your notes.

If you purchase your notes at a premium to the principal amount, the return on your investment will be lower than the return on notes purchased at the principal amount and the impact of certain key terms of the notes will be negatively affected

The payment at maturity will not be adjusted based on the original issue price you pay for the notes. If you purchase notes at a price that differs from the principal amount of the notes, then the return on your investment in such notes held to the maturity date will differ from, and may be substantially less than, the return on notes purchased at the principal amount. If you purchase your notes at a premium to the principal amount and hold them to the maturity date, the return on your investment in the notes will be lower than it would have been had you purchased the notes at the principal amount or at a discount to the principal amount. In addition, the impact of the threshold level, the threshold settlement amount and the maximum payment amount on the return on your investment will depend upon the price you pay for your notes relative to the principal amount. For example, if you purchase your notes at a premium to the principal amount, the threshold settlement amount and maximum payment amount will only permit a lower positive return on your investment in the notes than would have been the case for notes purchased at the principal amount or a discount to the principal amount. Similarly, if the final level is less than the threshold level, you will incur a greater percentage decrease in your investment in the notes than would have been the case for notes purchased at the principal amount or a discount to the principal amount.

The price at which the notes may be sold prior to maturity will depend on a number of factors and may be substantially less than the amount for which they were originally purchased

The price at which the notes may be sold prior to maturity will depend on a number of factors. Some of these factors include, but are not limited to: (i) actual or anticipated changes in the level of the reference asset over the full term of the notes, (ii) volatility of the level of the reference asset and the market's perception of future volatility of the level of the reference asset, (iii) changes in interest rates generally, (iv) any actual or anticipated changes in our credit ratings or credit spreads and (v) time remaining to maturity. In particular, because the provisions of the notes relating to the payment at maturity behave like options, the value of the notes will vary in ways which are non-linear and may not be intuitive.

Depending on the actual or anticipated level of the reference asset and other relevant factors, the market value of the notes may decrease and you may receive substantially less than 100% of the issue price if you sell your notes prior to maturity.

See "Additional Risk Factors Specific to the Notes—The Market Value of Your Notes May Be Influenced by Many Unpredictable Factors" beginning on page PS-7 of the accompanying product prospectus supplement.

The notes lack liquidity

The notes will not be listed on any securities exchange or automated quotation system. Therefore, there may be little or no secondary market for the notes. SCUSA and any other affiliates of the Bank and GS&Co. may, but are not obligated to, make a market in the notes. Even if there is a secondary market, it may not provide enough liquidity to allow you to trade or sell the notes easily. Because we do not expect that other broker-dealers will participate significantly in the secondary market for the notes, the price at which you may be able to trade your notes is likely to depend on the price, if any, at which SCUSA and GS&Co. are willing to purchase the notes from you. If at any time

SCUSA and GS&Co. were not to make a market in the notes, it is likely that there would be no secondary market for the notes. Accordingly, you should be willing to hold your notes to maturity.

P-19

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Hedging activities by the Bank and GS&Co. may negatively impact investors in the notes and cause our respective interests and those of our clients and counterparties to be contrary to those of investors in the notes

The Bank, GS&Co. or one or more of our or their respective affiliates has hedged or expects to hedge the obligations under the notes by purchasing futures and/or other instruments linked to the reference asset. The Bank, GS&Co. or one or more of our or their respective affiliates also expects to adjust the hedge by, among other things, purchasing or selling any of the foregoing, and perhaps other instruments linked to the reference asset and/or one or more of the reference asset constituent stocks, at any time and from time to time, and to unwind the hedge by selling any of the foregoing on or before the valuation date.

The Bank, GS&Co. or one or more of our or their respective affiliates may also enter into, adjust and unwind hedging transactions relating to other equity-linked notes whose returns are linked to changes in the level or price of the reference asset or the reference asset constituent stocks. Any of these hedging activities may adversely affect the level of the reference asset—directly or indirectly by affecting the price of the reference asset constituent stocks — and therefore the market value of the notes and the amount you will receive, if any, on the notes. Because the dealer, or an affiliate, from which you purchase notes is to conduct hedging activities for us in connection with the notes, that dealer or affiliate may profit in connection with such hedging activities and such profit, if any, will be in addition to the compensation that the dealer, or an affiliate, receives for the sale of the notes to you. You should be aware that the potential to earn fees in connection with hedging activities may create a further incentive for the dealer to sell the notes to you in addition to the compensation they would receive for the sale of the notes. In addition, you should expect that these transactions will cause the Bank, GS&Co. or our or their respective affiliates, or our respective clients or counterparties, to have economic interests and incentives that do not align with, and that may be directly contrary to, those of an investor in the notes. The Bank, GS&Co. or our or their respective affiliates will have no obligation to take, refrain from taking or cease taking any action with respect to these transactions based on the potential effect on an investor in the notes, and may receive substantial returns with respect to these hedging activities while the value of the notes may decline.

The Bank, SCUSA, GS&Co. and our or their respective affiliates regularly provide services to, or otherwise have business relationships with, a broad client base, which has included and may include us and the issuers of the reference asset constituent stocks and the market activities by the Bank, GS&Co. or our or their respective affiliates for our own account or for our clients could negatively impact investors in the notes

We, GS&Co. and our or their respective affiliates regularly provide a wide range of financial services, including financial advisory, investment advisory and transactional services to a substantial and diversified client base. As such, we each may act as an investor, investment banker, research provider, investment manager, investment advisor, market maker, trader, prime broker or lender. In those and other capacities, we, GS&Co. and/or our or their respective affiliates purchase, sell or hold a broad array of investments, actively trade securities (including the notes or other securities that we have issued), the reference asset constituent stocks, derivatives, loans, credit default swaps, indices, baskets and other financial instruments and products for our own accounts or for the accounts of our customers, and we will have other direct or indirect interests, in those securities and in other markets that may not be consistent with your interests and may adversely affect the level of the reference asset and/or the value of the notes. You should assume that we or they will, at present or in the future, provide such services or otherwise engage in transactions with, among others, us and the issuers of the reference asset constituent stocks, or transact in securities or instruments or with parties that are directly or indirectly related to these entities. These services could include making loans to or equity investments in those companies, providing financial advisory or other investment banking services, or issuing research reports. Any of these financial market activities may, individually or in the aggregate, have an adverse effect on the level of the reference asset and the market for your notes, and you should expect that our interests and those of GS&Co. and/or our or their respective affiliates, clients or counterparties, will at times be adverse to those of investors in the notes.

You should expect that we, GS&Co., and our or their respective affiliates, in providing these services, engaging in such transactions, or acting for our own accounts, may take actions that have direct or indirect effects on the notes or other securities that we may issue, the reference asset constituent stocks or other securities or instruments similar to or linked to the foregoing, and that such actions could be adverse to the interests of investors in the notes. In addition, in

connection with these activities, certain personnel within us, GS&Co. or our or their respective affiliates may have access to confidential material non-public information about these parties that would not be disclosed to investors in the notes.

P-20

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We, GS&Co. and our or their respective affiliates regularly offer a wide array of securities, financial instruments and other products into the marketplace, including existing or new products that are similar to the notes or other securities that we may issue, the reference asset constituent stocks or other securities or instruments similar to or linked to the foregoing. Investors in the notes should expect that the Bank, GS&Co. and our or their respective affiliates offer securities, financial instruments, and other products that may compete with the notes for liquidity or otherwise.

Other investors in the notes may not have the same interests as you

The interests of other investors may, in some circumstances, be adverse to your interests. Other investors may make requests or recommendations to us, SCUSA or GS&Co. regarding the establishment of transactions on terms that are adverse to your interests, and investors in the notes are not required to take into account the interests of any other investor in exercising remedies, voting or other rights in their capacity as noteholders. Further, other investors may enter into market transactions with respect to the notes, assets that are the same or similar to the notes, assets referenced by the notes (such as stocks or stock indices) or other similar assets or securities which may adversely impact the market for or value of your notes. For example, an investor could take a short position (directly or indirectly through derivative transactions) in respect of securities similar to your notes or in respect of the reference asset.

The calculation agent can postpone the valuation date for the notes if a market disruption event with respect to the reference asset occurs

If the calculation agent determines, in its sole discretion, that, on a day that would otherwise be the valuation date, a market disruption event with respect to the reference asset has occurred or is continuing for the reference asset, the valuation date will be postponed until the first following trading day on which no market disruption event occurs or is continuing, although the valuation date will not be postponed by more than seven scheduled trading days. Moreover, if the valuation date is postponed to the last possible day, but a market disruption event occurs or is continuing on that day, that day will nevertheless be the valuation date, and the calculation agent will determine the applicable final level that must be used to determine the payment at maturity. See “General Terms of the Notes—Unavailability of the Level of the Reference Asset on a Valuation Date” beginning on page PS-19 and “General Terms of the Notes—Market Disruption Events” beginning on page PS-20 in the accompanying product prospectus supplement.

There is no affiliation between the issuers of any reference asset constituent stock or the sponsor and us, SCUSA or GS&Co.

The Bank, SCUSA, GS&Co. and our or their respective affiliates may currently, or from time to time in the future, engage in business with the issuers of the reference asset constituent stocks or the sponsor. Neither we nor any of our affiliates have participated in the preparation of any publicly available information or made any “due diligence” investigation or inquiry with respect to the reference asset or the reference asset constituent stocks. Before investing in the notes you should make your own investigation into the reference asset and the issuers of the reference asset constituent stocks. See the section below entitled “Information Regarding the Reference Asset” in this pricing supplement for additional information about the reference asset.

Uncertain tax treatment

Significant aspects of the tax treatment of the notes are uncertain. You should consult your tax advisor about your tax situation. See “Certain Canadian Income Tax Consequences” and “Material U.S. Federal Income Tax Consequences” in this pricing supplement.

P-21

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## INFORMATION REGARDING THE REFERENCE ASSET

### The S&P 500<sup>®</sup> Index

The S&P 500<sup>®</sup> Index includes a representative sample of 500 companies in leading industries of the U.S. economy. The 500 companies are not the 500 largest companies listed on the NYSE and not all 500 companies are listed on the NYSE. S&P Dow Jones Indices LLC (“S&P” or the “sponsor”) chooses companies for inclusion in the S&P 500<sup>®</sup> Index with an aim of achieving a distribution by broad industry groupings that approximates the distribution of these groupings in the common stock population of the U.S. equity market. Although the S&P 500<sup>®</sup> Index contains 500 constituent companies, at any one time it may contain greater than 500 constituent trading lines since some companies included in the S&P 500<sup>®</sup> Index prior to July 31, 2017 may be represented by multiple share class lines in the index. The S&P 500<sup>®</sup> Index is calculated, maintained and published by S&P and is part of the S&P Dow Jones Indices family of indices. Additional information is available on the following websites:

[us.spindices.com/indices/equity/sp-500](http://us.spindices.com/indices/equity/sp-500) and [spji.com/](http://spji.com/). We are not incorporating by reference the websites or any material they include in this pricing supplement, the accompanying prospectus supplement or the accompanying prospectus.

S&P intends for the S&P 500<sup>®</sup> Index to provide a performance benchmark for the large-cap U.S. equity markets. Constituent changes are made on an as-needed basis and there is no schedule for constituent reviews. Constituent changes are generally announced one to five business days prior to the change. Relevant criteria for additions to the S&P 500<sup>®</sup> Index that are employed by S&P include: the company proposed for addition should have an unadjusted company market capitalization of \$6.1 billion or more (for spin-offs, eligibility is determined using when-issued prices, if available); using composite pricing and volume, the ratio of annual dollar value traded in the proposed constituent to float-adjusted market capitalization of that company should be 1.00 or greater and the stock should trade a minimum of 250,000 shares in each of the six months leading up to the evaluation date; the company must be a U.S. company (characterized as a Form 10-K filer, with its U.S. portion of fixed assets and revenues constituting a plurality of the total and with a primary listing of the common stock on the NYSE, NYSE Arca, NYSE American (formerly NYSE) MKT, NASDAQ Global Select Market, NASDAQ Select Market, NASDAQ Capital Market, Bats BZX, Bats BYX, Bats EDGA, Bats EDGX or IEX (each, an “eligible exchange”)); the proposed constituent has a public float of 50% or more of its stock; the inclusion of the company will contribute to sector balance in the index relative to sector balance in the market in the relevant market capitalization range; financial viability (the sum of the most recent four consecutive quarters’ Generally Accepted Accounting Principles (GAAP) earnings (net income excluding discontinued operations) should be positive as should the most recent quarter); and, for IPOs, the company must be traded on an eligible exchange for at least twelve months. In addition, constituents of the S&P MidCap 400<sup>®</sup> Index and the S&P SmallCap 600<sup>®</sup> Index can be added to the S&P 500<sup>®</sup> Index without meeting the financial viability, public float and/or liquidity eligibility criteria if the S&P Index Committee decides that such an addition will enhance the representativeness of the S&P 500<sup>®</sup> Index as a market benchmark. Certain types of organization structures and securities are always excluded, including business development companies (BDCs), limited partnerships, master limited partnerships, limited liability companies (LLCs), OTC bulletin board issues, closed-end funds, ETFs, ETNs, royalty trusts, tracking stocks, preferred stock and convertible preferred stock, unit trusts, equity warrants, convertible bonds, investment trusts, rights and American depositary receipts (ADRs). Stocks are deleted from the S&P 500<sup>®</sup> Index when they are involved in mergers, acquisitions or significant restructurings such that they no longer meet the inclusion criteria, and when they substantially violate one or more of the addition criteria. Stocks that are delisted or moved to the pink sheets or the bulletin board are removed, and those that experience a trading halt may be retained or removed in S&P’s discretion. S&P evaluates additions and deletions with a view to maintaining S&P 500<sup>®</sup> Index continuity.

For constituents included in the S&P 500<sup>®</sup> Index prior to July 31, 2017, all publicly listed multiple share class lines are included separately in the S&P 500<sup>®</sup> Index, subject to, in the case of any such share class line, that share class line satisfying the liquidity and float criteria discussed above and subject to certain exceptions. It is possible that one listed share class line of a company may be included in the S&P 500<sup>®</sup> Index while a second listed share class line of the same company is excluded. For companies that issue a second publicly traded share class to index share class holders, the newly issued share class line is considered for inclusion if the event is mandatory and the market capitalization of the distributed class is not considered to be de minimis.



As of July 31, 2017, companies with multiple share class lines are no longer eligible for inclusion in the S&P 500<sup>®</sup> Index. Constituents of the S&P 500<sup>®</sup> Index prior to July 31, 2017 with multiple share class lines will be grandfathered in and continue to be included in the S&P 500<sup>®</sup> Index. If an S&P 500<sup>®</sup> Index constituent reorganizes into a multiple share class line structure, that company will be reviewed for continued inclusion in the S&P 500<sup>®</sup> Index at the discretion of the S&P Index Committee.

As of December 31, 2018, the 500 companies included in the S&P 500<sup>®</sup> Index were divided into eleven Global Industry Classification Sectors. The Global Industry Classification Sectors include (with the approximate percentage currently included in such sectors indicated in parentheses): Information Technology (20.1%), Health Care (15.5%), Financials (13.3%), Communication Services (10.1%), Consumer Discretionary (9.9%), Industrials (9.2%), Consumer Staples (7.4%), Energy (5.3%), Utilities (3.3%), Real Estate (3.0%) and Materials (2.7%). (Sector designations are determined by the sponsor using criteria it has selected or developed. Index sponsors may use very different standards for determining sector designations. In addition, many companies operate in a number of sectors, but are listed in only one sector and the basis on which that sector is selected may also differ. As a result, sector comparisons between indices with different index sponsors may reflect differences in methodology as well as actual differences in the sector composition of the indices.) As of the close of business on September 21, 2018, S&P and MSCI, Inc. updated the Global Industry Classification Sector structure. Among other things, the update broadened the Telecommunications Services sector and renamed it the Communication Services sector. The renamed sector includes the previously existing Telecommunication Services Industry group, as well as the Media Industry group, which was moved from the Consumer Discretionary sector and renamed the Media & Entertainment Industry group. The Media & Entertainment Industry group contains three industries: Media, Entertainment and Interactive Media & Services. The Media industry continues to consist of the Advertising, Broadcasting, Cable & Satellite and Publishing sub-industries. The Entertainment industry contains the Movies & Entertainment sub-industry (which includes online entertainment streaming companies in addition to companies previously classified in such industry prior to September 21, 2018) and the Interactive Home Entertainment sub-industry (which includes companies previously classified in the Home Entertainment Software sub-industry prior to September 21, 2018 (when the Home Entertainment Software sub-industry was a sub-industry in the Information Technology sector)), as well as producers of interactive gaming products, including mobile gaming applications). The Interactive Media & Services industry and sub-industry includes companies engaged in content and information creation or distribution through proprietary platforms, where revenues are derived primarily through pay-per-click advertisements, and includes search engines, social media and networking platforms, online classifieds and online review companies. The Global Industry Classification Sector structure changes were effective for the S&P 500<sup>®</sup> Index as of the open of business on September 24, 2018 to coincide with the September 2018 quarterly rebalancing.

#### Calculation of the S&P 500<sup>®</sup> Index

The S&P 500<sup>®</sup> Index is calculated using a base-weighted aggregative methodology. The value of the S&P 500<sup>®</sup> Index on any day for which an index value is published is determined by a fraction, the numerator of which is the aggregate of the market price of each stock in the S&P 500<sup>®</sup> Index times the number of shares of such stock included in the S&P 500<sup>®</sup> Index, and the denominator of which is the divisor, which is described more fully below. The “market value” of any index stock is the product of the market price per share of that stock times the number of the then-outstanding shares of such index stock that are then included in the S&P 500<sup>®</sup> Index.

The S&P 500<sup>®</sup> Index is also sometimes called a “base-weighted aggregative index” because of its use of a divisor. The “divisor” is a value calculated by S&P that is intended to maintain conformity in index values over time and is adjusted for all changes in the index stocks’ share capital after the “base date” as described below. The level of the S&P 500<sup>®</sup> Index reflects the total market value of all index stocks relative to the index’s base date of 1941-43.

In addition, the S&P 500<sup>®</sup> Index is float-adjusted, meaning that the share counts used in calculating the S&P 500<sup>®</sup> Index reflect only those shares available to investors rather than all of a company’s outstanding shares. S&P seeks to exclude shares held by certain shareholders concerned with the control of a company, a group that generally includes the following: officers and directors and related individuals whose holdings are publicly disclosed, private equity, venture capital, special equity firms, publicly traded companies that hold shares for control in another company, strategic partners, holders of restricted shares, employee stock ownership plans, employee and family trusts, foundations associated with the company, holders of unlisted share classes of stock, government entities at all levels (except government retirement or pension funds) and any individual person listed as a 5% or greater stakeholder in a

company as reported in regulatory filings (collectively, “control holders”). To this end, S&P excludes all share-holdings (other than depository banks, pension funds, mutual funds, exchange traded fund providers, 401(k) plans of the company, government retirement and pension funds, investment funds

P-23

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of insurance companies, asset managers and investment funds, independent foundations, savings plans and investment plans) with a position greater than 5% of the outstanding shares of a company from the float-adjusted share count to be used in S&P 500<sup>®</sup> Index calculations.

The exclusion is accomplished by calculating an Investable Weight Factor (IWF) for each stock that is part of the numerator of the float-adjusted index fraction described above:

$IWF = (\text{available float shares}) / (\text{total shares outstanding})$

where available float shares is defined as total shares outstanding less shares held by control holders. In most cases, an IWF is reported to the nearest one percentage point. For companies with multiple share class lines, a separate IWF is calculated for each share class line.

Maintenance of the S&P 500<sup>®</sup> Index

In order to keep the S&P 500<sup>®</sup> Index comparable over time S&P engages in an index maintenance process. The S&P 500<sup>®</sup> Index maintenance process involves changing the constituents as discussed above, and also involves maintaining quality assurance processes and procedures, adjusting the number of shares used to calculate the S&P 500<sup>®</sup> Index, monitoring and completing the adjustments for company additions and deletions, adjusting for stock splits and stock dividends and adjusting for other corporate actions. In addition to its daily governance of indices and maintenance of the S&P 500<sup>®</sup> Index methodology, at least once within any 12 month period, the S&P Index Committee reviews the S&P 500<sup>®</sup> Index methodology to ensure the S&P 500<sup>®</sup> Index continues to achieve the stated objective, and that the data and methodology remain effective. The S&P Index Committee may at times consult with investors, market participants, security issuers included in or potentially included in the S&P 500<sup>®</sup> Index, or investment and financial experts.

Divisor Adjustments

The two types of adjustments primarily used by S&P are divisor adjustments and adjustments to the number of shares (including float adjustments) used to calculate the S&P 500<sup>®</sup> Index. Set forth below is a table of certain corporate events and their resulting effect on the divisor and the share count. If a corporate event requires an adjustment to the divisor, that event has the effect of altering the market value of the affected index stock and consequently of altering the aggregate market value of the index stocks following the event. In order that the level of the S&P 500<sup>®</sup> Index not be affected by the altered market value (which could be an increase or decrease) of the affected index stock, S&P generally derives a new divisor by dividing the post-event market value of the index stocks by the pre-event index value, which has the effect of reducing the S&P 500<sup>®</sup> Index's post-event value to the pre-event level.

Changes to the Number of Shares of a Constituent

The index maintenance process also involves tracking the changes in the number of shares included for each of the index companies. The timing of adjustments to the number of shares depends on the type of event causing the change, and whether the change represents 5% or more of the total share count (for companies with multiple share class lines, the 5% threshold is based on each individual share class line rather than total company shares). Changes as a result of mergers or acquisitions are implemented when the transaction occurs. At S&P's discretion, however, de minimis merger and acquisition changes may be accumulated and implemented with the updates made at the quarterly share updates as described below. Changes in a constituent's total shares of 5% or more due to public offerings (which must be underwritten, have a publicly available prospectus or prospectus summary filed with the Securities and Exchange Commission and include a public confirmation that the offering has been completed), are implemented as soon as reasonably possible. Other changes of 5% or more are made weekly and are announced on Fridays for implementation after the close of trading on the following Friday. For changes of less than 5%, on the third Friday of the last month in each calendar quarter, S&P updates the share totals of companies in the S&P 500<sup>®</sup> Index as required by any changes in the number of shares outstanding. S&P implements a share/IWF freeze beginning after the market close on the Tuesday preceding the second Friday of each quarterly rebalancing month and ending after the market close on the third Friday of the quarterly share count updates. During this frozen period, shares and IWFs are not changed except for certain corporate action events (merger activity, stock splits and rights offerings).

Adjustments for Corporate Actions

There is a large range of corporate actions that may affect companies included in the S&P 500<sup>®</sup> Index. Certain corporate actions require S&P to recalculate the share count or the float adjustment or to make an adjustment to the divisor to prevent



the value of the S&P 500<sup>®</sup> Index from changing as a result of the corporate action. This helps ensure that the movement of the S&P 500<sup>®</sup> Index does not reflect the corporate actions of individual companies in the S&P 500<sup>®</sup> Index.

#### Spin-Offs

As a general policy, a spin-off security is added to the S&P 500<sup>®</sup> Index at a zero price at the market close of the day before the ex-date (with no divisor adjustment). The spin-off security will remain in the S&P 500<sup>®</sup> Index if it meets all eligibility criteria. If the spin-off security is determined ineligible to remain in the S&P 500<sup>®</sup> Index, it will generally be removed after at least one day of regular way trading (with a divisor adjustment). If there is a gap between the ex-date and distribution date (or payable date), or if the spin-off security does not trade regular way on the ex-date, the spin-off security is kept in the S&P 500<sup>®</sup> Index until the spin-off security begins trading regular way. Several additional types of corporate actions, and their related adjustments, are listed in the table below.

Corporate Action	Share Count Revision Required?	Divisor Adjustment Required?
Stock split	Yes – share count is revised to reflect new count.	No – share count and price changes are off-setting
Change in shares outstanding (secondary issuance, share repurchase and/or share buy-back)	Yes – share count is revised to reflect new count.	Yes
Special dividends	No	Yes – calculation assumes that share price drops by the amount of the dividend; divisor adjustment reflects this change in index market value
Change in IWF	No	Yes – divisor change reflects the change in market value caused by the change to an IWF
Company added to or deleted from the S&P 500 <sup>®</sup> Index	No	Yes – divisor is adjusted by the net change in market value, calculated as the shares issued multiplied by the price paid
Rights Offering	No	Yes – divisor adjustment reflects increase in market capitalization (calculation assumes that offering is fully subscribed)

#### Recalculation Policy

S&P reserves the right to recalculate and republish the S&P 500<sup>®</sup> Index at its discretion in the event one of the following issues has occurred: (1) incorrect or revised closing price of one or more constituent securities; (2) missed corporate event; (3) incorrect application of corporate action or underlying index methodology; (4) late announcement of a corporate event; or (5) incorrect calculation or data entry error. The decision to recalculate the S&P 500<sup>®</sup> Index is made at the discretion of the underlying index manager and/or underlying index committee, as further discussed below. The potential market impact or disruption resulting from the potential recalculation is considered when making any such decision. In the event of an incorrect closing price, a missed corporate event or a misapplied corporate action, a late announcement of a corporate event, or an incorrect calculation or data entry error that is discovered within two trading days of its occurrence, the underlying index manager may, at his or her discretion, recalculate the S&P 500<sup>®</sup> Index without involving the underlying index committee. In the event any such event is discovered beyond the two trading day period, the underlying index committee shall decide whether the S&P 500<sup>®</sup> Index should be recalculated. In the event of an incorrect application of the methodology that results in the incorrect composition



and/or weighting of underlying index constituents, the underlying index committee shall determine whether or not to recalculate the S&P 500<sup>®</sup> Index following specified guidelines. In the event that the S&P 500<sup>®</sup> Index is recalculated, it shall be done within a reasonable timeframe following the detection and review of the issue.

#### Calculations and Pricing Disruptions

Closing levels for the S&P 500<sup>®</sup> Index are calculated by S&P based on the closing price of the individual constituents of the S&P 500<sup>®</sup> Index as set by their primary exchange. Closing prices are received by S&P from one of its third party vendors and verified by comparing them with prices from an alternative vendor. The vendors receive the closing price from the primary exchanges. Real-time intraday prices are calculated similarly without a second verification. Prices used for the calculation of

P-25

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real time underlying index values are based on the "Consolidated Tape". The Consolidated Tape is an aggregation of trades for each constituent over all regional exchanges and trading venues and includes the primary exchange. If there is a failure or interruption on one or more exchanges, real-time calculations will continue as long as the "Consolidated Tape" is operational.

If an interruption is not resolved prior to the market close, official closing prices will be determined by following the hierarchy set out in NYSE Rule 123C. A notice is published on the S&P website at [spdji.com](http://spdji.com) indicating any changes to the prices used in S&P 500<sup>®</sup> Index calculations. In extreme circumstances, S&P may decide to delay underlying index adjustments or not publish the S&P 500<sup>®</sup> Index. Real-time indices are not restated.

#### Unexpected Exchange Closures

An unexpected market/exchange closure occurs when a market/exchange fully or partially fails to open or trading is temporarily halted. This can apply to a single exchange or to a market as a whole, when all of the primary exchanges are closed and/or not trading. Unexpected market/exchange closures are usually due to unforeseen circumstances, such as natural disasters, inclement weather, outages, or other events.

To a large degree, S&P is dependent on the exchanges to provide guidance in the event of an unexpected exchange closure. S&P's decision making is dependent on exchange guidance regarding pricing and mandatory corporate actions.

NYSE Rule 123C provides closing contingency procedures for determining an official closing price for listed securities if the exchange is unable to conduct a closing transaction in one or more securities due to a system or technical issue.

3:00 PM ET is the deadline for an exchange to determine its plan of action regarding an outage scenario. As such, S&P also uses 3:00 PM ET as the cutoff.

If all major exchanges fail to open or unexpectedly halt trading intraday due to unforeseen circumstances, S&P will take the following actions:

#### Market Disruption Prior to Open of Trading:

- (i) If all exchanges indicate that trading will not open for a given day, S&P will treat the day as an unscheduled market holiday. The decision will be communicated to clients as soon as possible through the normal channels. Indices containing multiple markets will be calculated as normal, provided that at least one market is open that day. Indices which only contain closed markets will not be calculated.
- (ii) If exchanges indicate that trading, although delayed, will open for a given day, S&P will begin underlying index calculation when the exchanges open.

#### Market Disruption Intraday:

- (i) If exchanges indicate that trading will not resume for a given day, the S&P 500<sup>®</sup> Index level will be calculated using prices determined by the exchanges based on NYSE Rule 123C. Intraday S&P 500<sup>®</sup> Index values will continue to use the last traded composite price until the primary exchange publishes official closing prices.

#### License Agreement

Standard & Poor's Financial Services LLC ("S&P") and the Bank have entered into a non-exclusive license agreement providing for the license to the Bank, and certain of its affiliates, in exchange for a fee, of the right to use the S&P 500<sup>®</sup> Index in connection with securities, including the notes. The S&P 500<sup>®</sup> Index is owned and published by S&P Dow Jones LLC ("S&P Dow Jones"), an affiliate of S&P.

The license agreement between S&P and the Bank provides that the following language must be set forth in this pricing supplement:

The notes are not sponsored, endorsed, sold or promoted by S&P or its third party licensors. Neither S&P nor its third party licensors makes any representation or warranty, express or implied, to the owners 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 S&P 500<sup>®</sup> Index to track general stock market performance. S&P's and its third party licensors' only relationship to the Bank is the licensing of certain trademarks and trade names of S&P and the third party licensors and of the S&P 500<sup>®</sup> Index which is determined, composed and calculated by S&P or its third party licensors without regard to the Bank or the notes. S&P and its third party licensors have no obligation to take the needs of the Bank or the owners of the notes into consideration in determining, composing or calculating the S&P 500<sup>®</sup> Index. Neither S&P nor its third party licensors are responsible for and has 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 has no obligation or liability in connection with the administration, marketing or trading of the notes.

NEITHER S&P, ITS AFFILIATES NOR THEIR THIRD PARTY LICENSORS GUARANTEE THE ADEQUACY, ACCURACY, TIMELINESS OR COMPLETENESS OF THE S&P 500® INDEX OR ANY DATA INCLUDED THEREIN OR ANY COMMUNICATIONS (INCLUDING ELECTRONIC COMMUNICATIONS) WITH RESPECT THERETO. S&P, ITS AFFILIATES AND THEIR THIRD PARTY LICENSORS SHALL NOT BE SUBJECT TO ANY DAMAGES OR LIABILITY FOR ANY ERRORS, OMISSIONS OR DELAYS THEREIN. S&P MAKES NO EXPRESS OR IMPLIED WARRANTIES, AND EXPRESSLY DISCLAIMS ALL WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE OR USE WITH RESPECT TO THE MARKS, THE INDEX OR ANY DATA INCLUDED THEREIN. WITHOUT LIMITING ANY OF THE FOREGOING, IN NO EVENT WHATSOEVER SHALL S&P, ITS AFFILIATES OR THEIR THIRD PARTY LICENSORS 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. WITHOUT LIMITING ANY OF THE FOREGOING, IN NO EVENT SHALL S&P HAVE ANY LIABILITY FOR ANY SPECIAL, PUNITIVE, INDIRECT, OR CONSEQUENTIAL DAMAGES (INCLUDING LOST PROFITS), EVEN IF NOTIFIED OF THE POSSIBILITY OF SUCH DAMAGES.

P-27

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## Historical Information

We obtained the information regarding the historical performance of the reference asset in the table and graph below from Bloomberg.

We have not undertaken an independent review or due diligence of the information. 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.

The following table sets forth the quarterly high and low closing levels for the reference asset, based on daily closing levels. The closing level of the reference asset on January 24, 2019 was 2,642.33. Past performance of the reference asset is not indicative of the future performance of the reference asset.

Quarter Begin	Quarter End	Quarterly High	Quarterly Low	Quarterly Close
1/1/2013	3/31/2013	1,569.19	1,457.15	1,569.19
4/1/2013	6/30/2013	1,669.16	1,541.61	1,606.28
7/1/2013	9/30/2013	1,725.52	1,614.08	1,681.55
10/1/2013	12/31/2013	1,848.36	1,655.45	1,848.36
1/1/2014	3/31/2014	1,878.04	1,741.89	1,872.34
4/1/2014	6/30/2014	1,962.87	1,815.69	1,960.23
7/1/2014	9/30/2014	2,011.36	1,909.57	1,972.29
10/1/2014	12/31/2014	2,090.57	1,862.49	2,058.90
1/1/2015	3/31/2015	2,117.39	1,992.67	2,067.89
4/1/2015	6/30/2015	2,130.82	2,057.64	2,063.11
7/1/2015	9/30/2015	2,128.28	1,867.61	1,920.03
10/1/2015	12/31/2015	2,109.79	1,923.82	2,043.94
1/1/2016	3/31/2016	2,063.95	1,829.08	2,059.74
4/1/2016	6/30/2016	2,119.12	2,000.54	2,098.86
7/1/2016	9/30/2016	2,190.15	2,088.55	2,168.27
10/1/2016	12/31/2016	2,271.72	2,085.18	2,238.83
1/1/2017	3/31/2017	2,395.96	2,257.83	2,362.72
4/1/2017	6/30/2017	2,453.46	2,328.95	2,423.41
7/1/2017	9/30/2017	2,519.36	2,409.75	2,519.36
10/1/2017	12/31/2017	2,690.16	2,529.12	2,673.61
1/1/2018	3/31/2018	2,872.87	2,581.00	2,640.87
4/1/2018	6/30/2018	2,786.85	2,581.88	2,718.37
7/1/2018	9/30/2018	2,930.75	2,713.22	2,913.98
10/1/2018	12/31/2018	2,925.51	2,351.10	2,506.85
1/1/2019	1/24/2019*	2,670.71	2,447.89	2,642.33

As of the date of this pricing supplement, available information for the first calendar quarter of 2019 includes data \* for the period from January 1, 2019 through January 24, 2019. Accordingly, the “Quarterly High,” “Quarterly Low” and “Quarterly Close” data indicated are for this shortened period only and do not reflect complete data for the first calendar quarter of 2019.

The graph below illustrates the performance of the reference asset from January 1, 2009 through January 24, 2019. Past performance of the reference asset is not indicative of the future performance of the reference asset.

P-29

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SUPPLEMENTAL PLAN OF DISTRIBUTION (CONFLICTS OF INTEREST)

SCUSA, our affiliate, will purchase the notes at the principal amount and, as part of the distribution of the notes, will sell the notes to GS&Co. at a discount reflecting commissions of \$13.50 per \$1,000 principal amount of notes. The commissions per \$1,000 principal amount are comprised of \$2.50 of fees and \$11.00 of selling commission. In accordance with the terms of a distributor accession letter, GS&Co. has been appointed as a distribution agent under the distribution agreement and may purchase notes from the Bank or its affiliates. At the time we issue the notes, we will enter into certain hedging arrangements (which may include call options, put options or other derivatives) with GS&Co. or one of its affiliates.

In addition, SCUSA, GS&Co. and their respective affiliates or agents may use the accompanying product prospectus supplement to which this pricing supplement relates in market-making transactions after the initial sale of the notes. While SCUSA and GS&Co. may make markets in the notes, they are under no obligation to do so and may discontinue any market-making activities at any time without notice. See the sections titled “Supplemental Plan of Distribution (Conflicts of Interest)” in the accompanying prospectus supplement and accompanying product prospectus supplement.

The price at which you purchase the notes includes costs that the Bank, GS&Co. or our or their respective affiliates expect to incur and profits that the Bank, GS&Co. or our or their respective affiliates expect to realize in connection with hedging activities related to the notes, as set forth above. These costs and profits will likely reduce the secondary market price, if any secondary market develops, for the notes. As a result, you may experience an immediate and substantial decline in the market value of your notes on the original issue date.

Conflicts of interest

Each of SCUSA and Scotia Capital Inc. is an affiliate of the Bank and, as such, has a “conflict of interest” in this offering within the meaning of FINRA Rule 5121. In addition, the Bank will receive the gross proceeds from the initial public offering of the notes, thus creating an additional conflict of interest within the meaning of Rule 5121. Consequently, the offering is being conducted in compliance with the provisions of Rule 5121. Neither SCUSA nor Scotia Capital Inc. is permitted to sell notes in this offering to an account over which it exercises discretionary authority without the prior specific written approval of the account holder.

SCUSA, GS&Co., and their respective affiliates are full service financial institutions engaged in various activities, which may include securities trading, commercial and investment banking, financial advisory, investment management, investment research, principal investment, hedging, financing and brokerage activities. SCUSA, GS&Co., and their respective affiliates have, from time to time, performed, and may in the future perform, various financial advisory and investment banking services for the Bank, for which they received or will receive customary fees and expenses.

In the ordinary course of their various business activities, SCUSA, GS&Co., and their respective affiliates may make or hold a broad array of investments and actively trade debt and equity securities (or related derivative securities) and financial instruments (including bank loans) for their own account and for the accounts of their customers, and such investment and securities activities may involve securities and/or instruments of the Bank. SCUSA, GS&Co., and their respective affiliates may also make investment recommendations and/or publish or express independent research views in respect of such securities or instruments and may at any time hold, or recommend to clients that they acquire, long and/or short positions in such securities and instruments.

Additionally, because the dealer from which you purchase the notes is to conduct hedging activities for us in connection with the notes, that dealer may profit in connection with such hedging activities and such profit, if any, will be in addition to the compensation that the dealer receives for the sale of the notes to you. You should be aware that the potential to earn fees in connection with hedging activities may create a further incentive for the dealer to sell the notes to you in addition to the compensation they would receive for the sale of the notes.

Prohibition of Sales to EEA Retail Investors

The notes are not intended to be offered, sold or otherwise made available to and should not be offered, sold or otherwise made available to any retail investor in the European Economic Area (“EEA”). For these purposes, a retail investor means a person who is one (or more) of: (i) a retail client as defined in point (11) of Article 4(1) of Directive 2014/65/EU, as amended (“MiFID II”); (ii) a customer within the meaning of Directive 2002/92/EC, as amended, where

that customer would not qualify as a professional client as defined in point (10) of Article 4(1) of MiFID II; or (iii) not a qualified investor as defined in Directive 2003/71/EC, as amended. Consequently no key information document required by Regulation (EU) No 1286/2014, as

P-30

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amended (the “PRIIPs Regulation”), for offering or selling the notes or otherwise making them available to retail investors in the EEA has been prepared and therefore offering or selling the notes or otherwise making them available to any retail investor in the EEA may be unlawful under the PRIIPs Regulation.

#### CERTAIN CANADIAN INCOME TAX CONSEQUENCES

See “Supplemental Discussion of Canadian Tax Consequences” on page PS-27 of the accompanying product prospectus supplement.

#### MATERIAL U.S. FEDERAL INCOME TAX CONSEQUENCES

The U.S. federal income tax consequences of your investment in the notes are uncertain. There are no statutory provisions, regulations, published rulings or judicial decisions addressing the characterization for U.S. federal income tax purposes of securities with terms that are substantially the same as the notes. No ruling from the U.S. Internal Revenue Service (the “IRS”) has been sought as to the U.S. federal income tax consequences of your investment in the notes, and the following discussion is not binding on the IRS. Some of these tax consequences are summarized below, but we urge you to read the more detailed discussion under “Material U.S. Federal Income Tax Consequences” in the product prospectus supplement and to discuss the tax consequences of your particular situation with your tax advisor. This discussion is based upon the Internal Revenue Code of 1986, as amended (the “Code”), final, temporary and proposed U.S. Treasury Department (the “Treasury”) regulations, rulings and decisions, in each case, as available and in effect as of the date hereof, all of which are subject to change, possibly with retroactive effect. Tax consequences under state, local and non-U.S. laws are not addressed herein.

**U.S. Tax Treatment.** Pursuant to the terms of the notes, the Bank and you agree, in the absence of a statutory or regulatory change or an administrative determination or judicial ruling to the contrary, to characterize your notes as prepaid derivative contracts with respect to the reference asset. If your notes are so treated, you should generally recognize gain or loss upon the taxable disposition of your notes in an amount equal to the difference between the amount you receive at such time and the amount you paid for your notes. Such gain or loss should generally be long-term capital gain or loss if you have held your notes for more than one year (otherwise such gain or loss should be short-term capital gain or loss if held for one year or less). The deductibility of capital losses is subject to limitations. There may also be a risk that the IRS could assert that the notes should not give rise to long-term capital gain or loss because the notes offer, at least in part, short exposure to the reference asset. You should consult your tax advisor regarding this risk.

Based on certain factual representations received from us, our special U.S. tax counsel, Cadwalader, Wickersham & Taft LLP, is of the opinion that it would be reasonable to treat your notes in the manner described above. However, because there is no authority that specifically addresses the tax treatment of the notes, it is possible that your notes could alternatively be treated for tax purposes as a single contingent payment debt instrument, or pursuant to some other characterization, such that the timing and character of your income from the notes could differ materially and adversely from the treatment described above.

**Notice 2008-2.** In 2007, the IRS released a notice that may affect the taxation of holders of the notes. According to Notice 2008-2, the IRS and the Treasury are actively considering whether a holder of an instrument such as the notes should be required to accrue ordinary income on a current basis, and they are seeking taxpayer comments on the subject. It is not possible to determine what guidance they will ultimately issue, if any. It is possible, however, that under such guidance, holders of the notes will ultimately be required to accrue income currently and this could be applied on a retroactive basis. The IRS and the Treasury are also considering other relevant issues, including whether additional gain or loss from such instruments should be treated as ordinary or capital, whether non-U.S. holders of such instruments should be subject to withholding tax on any deemed income accruals, and whether the special “constructive ownership rules” of Section 1260 of the Code should be applied to such instruments.

**Medicare Tax on Net Investment Income.** U.S. holders that are individuals or estates and certain trusts are subject to an additional 3.8% tax on all or a portion of their “net investment income,” or “undistributed net investment income” in the case of an estate or trust, which may include any income or gain with respect to the notes, to the extent of their net

investment income or undistributed net investment income (as the case may be) that, when added to their other modified adjusted gross income, exceeds \$200,000 for an unmarried individual, \$250,000 for a married taxpayer filing a joint return (or a surviving spouse), \$125,000 for a married individual filing a separate return or the dollar amount at which the highest tax bracket begins for an estate or trust. The 3.8% Medicare tax is determined in a different manner than the regular income tax. U.S.

P-31

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holders should consult their tax advisors as to the consequences of the 3.8% Medicare tax with respect to their investment in the notes.

**Specified Foreign Financial Assets.** U.S. holders may be subject to reporting obligations with respect to their notes if they do not hold their notes in an account maintained by a financial institution and the aggregate value of their notes and certain other “specified foreign financial assets” (applying certain attribution rules) exceeds an applicable threshold. Significant penalties can apply if a U.S. holder is required to disclose its notes and fails to do so.

**Non-U.S. Holders.** If you are a non-U.S. holder, subject to Section 871(m) of the Code and FATCA, discussed below, you should generally not be subject to U.S. withholding tax with respect to payments on your notes or to generally applicable information reporting and backup withholding requirements with respect to payments on your notes if you comply with certain certification and identification requirements as to your non-U.S. status including providing us (and/or the applicable withholding agent) a properly executed and fully completed applicable IRS Form W-8. Subject to Section 897 of the Code and Section 871(m) of the Code, as discussed below, gain from taxable disposition of the notes generally will not be subject to U.S. tax unless (i) such gain is effectively connected with a trade or business conducted by you in the U.S., (ii) you are a non-resident alien individual and are present in the U.S. for 183 days or more during the taxable year of such taxable disposition and certain other conditions are satisfied or (iii) you have certain other present or former connections with the U.S.

**Section 897.** We will not attempt to ascertain whether the issuer of any reference asset constituent stock would be treated as a “United States real property holding corporation” (a “USRPHC”) within the meaning of Section 897 of the Code. We also have not attempted to determine whether the Notes should be treated as “United States real property interests” (“USRPI”) as defined in Section 897 of the Code. If any such entity or the notes were so treated, certain adverse U.S. federal income tax consequences could possibly apply, including subjecting any gain realized by a non-U.S. holder in respect of the notes upon a taxable disposition (including cash settlement) of the notes to U.S. federal income tax on a net basis, and the proceeds from such a taxable disposition to a withholding tax. Non-U.S. holders should consult their tax advisors regarding the potential treatment of any issuer of a reference asset constituent stock as a USRPHC or the notes as USRPI.

**Section 871(m).** A 30% withholding tax (which may be reduced by an applicable income tax treaty) is imposed under Section 871(m) of the Code on certain “dividend equivalents” paid or deemed paid to a non-U.S. holder with respect to a “specified equity-linked instrument” that references one or more dividend-paying U.S. equity securities or indices containing U.S. equity securities. The withholding tax can apply even if the instrument does not provide for payments that reference dividends. Treasury regulations provide that the withholding tax applies to all dividend equivalents paid or deemed paid on specified equity-linked instruments that have a delta of one (“delta-one specified equity-linked instruments”) issued after 2016 and to all dividend equivalents paid or deemed paid on all other specified equity-linked instruments issued after 2018. However, the IRS has issued guidance that states that the Treasury and the IRS intend to amend the effective dates of the Treasury regulations to provide that withholding on dividend equivalents paid or deemed paid will not apply to specified equity-linked instruments that are not delta-one specified equity-linked instruments and are issued before January 1, 2021.

Based on our determination that the notes are not “delta-one” with respect to the reference asset or any U.S. reference asset constituent stocks, our special U.S. tax counsel is of the opinion that the notes should not be delta-one specified equity-linked instruments and thus should not be subject to withholding on dividend equivalents. Our determination is not binding on the IRS, and the IRS may disagree with this determination. Furthermore, the application of Section 871(m) of the Code will depend on our determinations made upon issuance of the notes. If withholding is required, we will not make payments of any additional amounts.

Nevertheless, after issuance, it is possible that your notes could be deemed to be reissued for tax purposes upon the occurrence of certain events affecting the reference asset, any U.S. reference asset constituent stocks or your notes, and following such occurrence your notes could be treated as delta-one specified equity-linked instruments that are subject to withholding on dividend equivalents. It is also possible that withholding tax or other tax under Section 871(m) of the Code could apply to the notes under these rules if you enter, or have entered, into certain other transactions in respect of the reference asset, any U.S. reference asset constituent stocks or the notes. If you enter, or have entered, into other transactions in respect of the reference asset, any U.S. reference asset constituent stocks or the notes, you should consult your tax advisor regarding the application of Section 871(m) of the Code to your notes in

the context of your other transactions.

P-32

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Because of the uncertainty regarding the application of the 30% withholding tax on dividend equivalents to the notes, you are urged to consult your tax advisor regarding the potential application of Section 871(m) of the Code and the 30% withholding tax to an investment in the notes.

**U.S. Federal Estate Tax Treatment of Non-U.S. Holders.** A note may be subject to U.S. federal estate tax if an individual non-U.S. holder holds the note at the time of his or her death. The gross estate of a non-U.S. holder domiciled outside the U.S. includes only property situated in the U.S. Individual non-U.S. holders should consult their tax advisors regarding the U.S. federal estate tax consequences of holding the notes at death.

**FATCA.** The Foreign Account Tax Compliance Act (“FATCA”) was enacted on March 18, 2010, and imposes a 30% U.S. withholding tax on “withholdable payments” (i.e., certain U.S.-source payments, including interest (and original issue discount), dividends, other fixed or determinable annual or periodical gain, profits, and income, and on the gross proceeds from a disposition of property of a type which can produce U.S.-source interest or dividends) and “passthru payments” (i.e., certain payments attributable to withholdable payments) made to certain foreign financial institutions (and certain of their affiliates) unless the payee foreign financial institution agrees (or is required), among other things, to disclose the identity of any U.S. individual with an account at the institution (or the relevant affiliate) and to annually report certain information about such account. FATCA also requires withholding agents making withholdable payments to certain foreign entities that do not disclose the name, address, and taxpayer identification number of any substantial U.S. owners (or do not certify that they do not have any substantial U.S. owners) to withhold tax at a rate of 30%. Under certain circumstances, a holder may be eligible for refunds or credits of such taxes.

Pursuant to final and temporary Treasury regulations and other IRS guidance, the withholding and reporting requirements under FATCA will generally apply to certain “withholdable payments”, will not apply to gross proceeds on a sale or disposition and will apply to certain foreign passthru payments only to the extent that such payments are made after the date that is two years after final regulations defining the term “foreign passthru payment” are published. If withholding is required, we (or the applicable paying agent) will not be required to pay additional amounts with respect to the amounts so withheld. Foreign financial institutions and non-financial foreign entities located in jurisdictions that have an intergovernmental agreement with the U.S. governing FATCA may be subject to different rules.

Investors should consult their own advisors about the application of FATCA, in particular if they may be classified as financial institutions (or if they hold their notes through a non-U.S. entity) under the FATCA rules.

**Proposed Legislation.** In 2007, legislation was introduced in Congress that, if it had been enacted, would have required holders of notes purchased after the bill was enacted to accrue interest income over the term of the notes despite the fact that there will be no interest payments over the term of the notes.

Furthermore, in 2013, the House Ways and Means Committee released in draft form certain proposed legislation relating to financial instruments. If it had been enacted, the effect of this legislation generally would have been to require instruments such as the notes to be marked to market on an annual basis with all gains and losses to be treated as ordinary, subject to certain exceptions.

It is impossible to predict whether any similar or identical bills will be enacted in the future, or whether any such bill would affect the tax treatment of your notes. You are urged to consult your tax advisor regarding the possible changes in law and their possible impact on the tax treatment of your notes.

Both U.S. and non-U.S. holders should consult their tax advisors regarding the U.S. federal income tax consequences of an investment in the notes, as well as any tax consequences arising under the laws of any state, local or non-U.S. taxing jurisdiction (including that of the Bank).