

Units
\$10 principal amount per unit
CUSIP No.

Pricing Date*
Settlement Date*
Maturity Date*

September , 2016
September , 2016
September , 2017

*Subject to change based on the actual date the notes are priced for initial sale to the public (the "pricing date")



STEP Income Securities® Linked to the American Depositary Receipts of Nokia Corporation

- Maturity of approximately one year and one week
- Interest payable quarterly at the rate of 9.50% per year
- A payment of [\$0.10 to \$0.50] per unit if the Underlying Stock increases to or above 109.50% of the Starting Value
- 1-to-1 downside exposure to decreases in the Underlying Stock, with up to 100% of your principal at risk
- All payments on the notes are subject to the credit risk of Royal Bank of Canada
- In addition to the underwriting discount set forth below, the notes include a hedging-related charge of \$0.075 per unit. See "Structuring the Notes".
- Limited secondary market liquidity, with no exchange listing
- The notes are unsecured debt securities and are not savings accounts or insured deposits of a bank. The notes are not insured or guaranteed by the Canada Deposit Insurance Corporation, the U.S. Federal Deposit Insurance Corporation, or any other governmental agency of Canada or the United States

The notes are being issued by Royal Bank of Canada ("RBC"). There are important differences between the notes and a conventional debt security, including different investment risks and certain additional costs. See "Risk Factors" on page TS-6 of this term sheet and beginning on page PS-6 of product supplement STEPS-1.

The initial estimated value of the notes as of the pricing date is expected to be between \$9.36 and \$9.66 per unit, which is less than the public offering price listed below. See "Summary" on the following page, "Risk Factors" beginning on page TS-6 of this term sheet and "Structuring the Notes" on page TS-10 of this term sheet for additional information. The actual value of your notes at any time will reflect many factors and cannot be predicted with accuracy.

None of the Securities and Exchange Commission (the "SEC"), any state securities commission, or any other regulatory body has approved or disapproved of these securities or determined if this Note Prospectus (as defined below) is truthful or complete. Any representation to the contrary is a criminal offense.

	<u>Per Unit</u>	<u>Total</u>
Public offering price ⁽¹⁾⁽²⁾	\$10.000	\$
Underwriting discount ⁽²⁾	\$ 0.175	\$
Proceeds, before expenses, to RBC .	\$ 9.825	\$

(1) Plus accrued interest from the scheduled settlement date, if settlement occurs after that date.

(2) For any purchase of 500,000 units or more in a single transaction by an individual investor or in combined transactions with the investor's household in this offering, the public offering price and the underwriting discount will be \$9.950 per unit and \$0.125 per unit, respectively. See "Supplement to the Plan of Distribution" below.

The notes:

Are Not FDIC Insured	Are Not Bank Guaranteed	May Lose Value
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Merrill Lynch & Co.

September , 2016

Summary

The **STEP Income Securities®** Linked to the American Depositary Receipts of Nokia Corporation, due September , 2017 (the “notes”) are our senior unsecured debt securities. The notes are not guaranteed or insured by the Canada Deposit Insurance Corporation or the U.S. Federal Deposit Insurance Corporation or secured by collateral. **The notes will rank equally with all of our other unsecured and unsubordinated debt. Any payments due on the notes, including any repayment of principal, will be subject to the credit risk of RBC.** The notes provide quarterly interest payments. Additionally, if the Ending Value of the Market Measure, which is the American Depositary Receipts of Nokia Corporation (the “Underlying Stock”), is at or above the Step Level, the notes will also provide a payment of [\$0.10 to \$0.50] per unit at maturity. If the Ending Value is less than the Step Level, the Redemption Amount will not be greater than your principal amount. If the Ending Value is less than the Starting Value, the Redemption Amount will be less than the principal amount of your notes, and may be as low as zero. If the Ending Value is less than the Threshold Value, the Redemption Amount will be less, and possibly significantly less, than the principal amount of your notes. Payments on the notes, including the amount you receive at maturity, will be calculated based on the \$10 principal amount per unit and will depend on the performance of the Underlying Stock, subject to our credit risk. See “Terms of the Notes” below.

The economic terms of the notes (including the Step Payment) are based on our internal funding rate, which is the rate we would pay to borrow funds through the issuance of market-linked notes and the economic terms of certain related hedging arrangements. Our internal funding rate is typically lower than the rate we would pay when we issue conventional fixed or floating rate debt securities. This difference in funding rate, as well as the underwriting discount and the hedging related charge described below, will reduce the economic terms of the notes to you and the initial estimated value of the notes on the pricing date. Due to these factors, the public offering price you pay to purchase the notes will be greater than the initial estimated value of the notes.

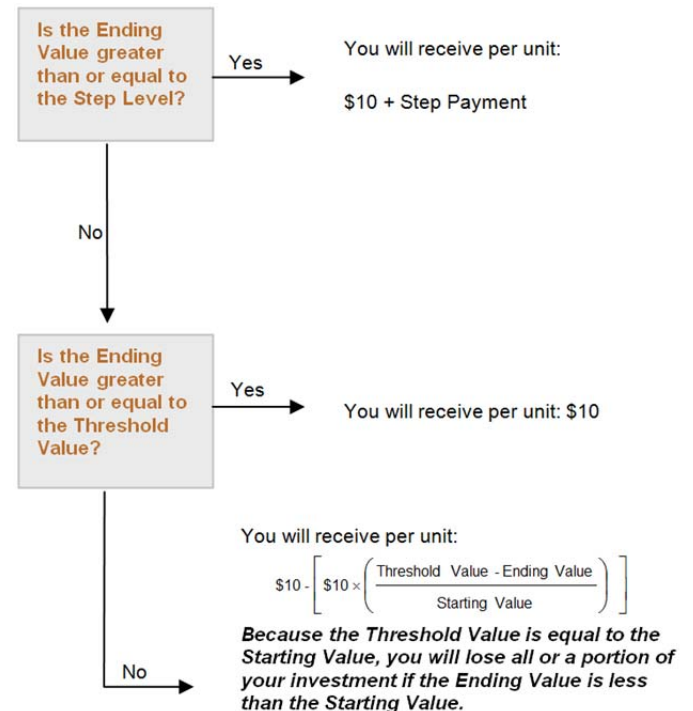
On the cover page of this term sheet, we have provided the initial estimated value range for the notes. This initial estimated value range was determined based on our and our affiliates’ pricing models, which take into consideration our internal funding rate and the market prices for the hedging arrangements related to the notes. The initial estimated value of the notes calculated on the pricing date will be set forth in the final term sheet made available to investors in the notes. For more information about the initial estimated value and the structuring of the notes, see “Structuring the Notes” on page TS-10.

Terms of the Notes

Issuer:	Royal Bank of Canada (“RBC”)
Principal Amount:	\$10.00 per unit
Term:	Approximately one year and one week
Market Measure:	American Depositary Receipts of Nokia Corporation (the “Underlying Company”) (NYSE symbol: NOK)
Starting Value:	The Volume Weighted Average Price on the pricing date.
Volume Weighted Average Price:	The volume weighted average price (rounded to two decimal places) shown on page “AQR” on Bloomberg L.P. for trading in shares of the Underlying Stock taking place from approximately 9:30 a.m. to 4:02 p.m. on all U.S. exchanges.
Ending Value:	The Closing Market Price of the Underlying Stock on the valuation date, multiplied by the Price Multiplier. The valuation date is subject to postponement in the event of Market Disruption Events, as described beginning on page PS-18 of product supplement STEPS-1.
Valuation Date:	Approximately the fifth scheduled trading day immediately prior to the maturity date.
Interest Rate:	9.50% per year
Interest Payment Dates:	December , 2016, March , 2017, June , 2017 and September , 2017
Step Payment:	[\$0.10 to \$0.50] per unit, which represents a return of [1.00% to 5.00%] of the principal amount. The actual Step Payment will be determined on the pricing date.
Step Level:	109.50% of the Starting Value, rounded to two decimal places
Threshold Value:	100% of the Starting Value.
Price Multiplier:	1, subject to adjustment for certain corporate events relating to the Underlying Stock described beginning on page PS-19 of product supplement STEPS-1.
Fees and Charges:	The underwriting discount of \$0.175 per unit listed on the cover page and the hedging related charge of \$0.075 per unit described in “Structuring the Notes” on page TS-10.
Calculation Agent:	Merrill Lynch, Pierce, Fenner & Smith Incorporated (“MLPF&S”).

Redemption Amount Determination

In addition to interest payable, on the maturity date, you will receive a cash payment per unit determined as follows:



The terms and risks of the notes are contained in this term sheet and in the following:

- Product supplement STEPS-1 dated May 26, 2016:
<https://www.sec.gov/Archives/edgar/data/1000275/000114036116067247/form424b5.htm>
- Series G MTN prospectus supplement dated January 8, 2016:
<https://www.sec.gov/Archives/edgar/data/1000275/000121465916008811/p14150424b3.htm>
- Prospectus dated January 8, 2016:
<http://www.sec.gov/Archives/edgar/data/1000275/000121465916008810/j18160424b3.htm>

These documents (together, the “Note Prospectus”) have been filed as part of a registration statement with the SEC, which may, without cost, be accessed on the SEC website as indicated above or obtained from MLPF&S by calling 1-800-294-1322. Before you invest, you should read the Note Prospectus, including this term sheet, for information about us and this offering. Any prior or contemporaneous oral statements and any other written materials you may have received are superseded by the Note Prospectus. Capitalized terms used but not defined in this term sheet have the meanings set forth in product supplement STEPS-1. Unless otherwise indicated or unless the context requires otherwise, all references in this document to “we,” “us,” “our,” or similar references are to RBC.

Investor Considerations

You may wish to consider an investment in the notes if:

- You anticipate that the Ending Value will be greater than or equal to the Starting Value.
- You seek interest payments on your investment.
- You accept that the maximum return on the notes is limited to the sum of the quarterly interest payments and the Step Payment, if any.
- You accept that your investment may result in a loss, which could be significant, if the Ending Value is below the Starting Value.
- You are willing to forgo dividends or other benefits of owning shares of the Underlying Stock.
- You are willing to accept a limited or no market for sales prior to maturity, and understand that the market prices for the notes, if any, will be affected by various factors, including our actual and perceived creditworthiness, our internal funding rate and fees and charges on the notes.
- You are willing to assume our credit risk, as issuer of the notes, for all payments under the notes, including the Redemption Amount.

The notes may not be an appropriate investment for you if:

- You anticipate that the Ending Value will be less than the Starting Value.
- You anticipate that the price of the Underlying Stock will increase substantially and do not want a payment at maturity that is limited to the Step Payment.
- You seek principal repayment or preservation of capital.
- In addition to interest payments, you seek an additional guaranteed return above the principal amount.
- You want to receive dividends or other distributions paid on the Underlying Stock.
- You seek an investment for which there will be a liquid secondary market.
- You are unwilling or are unable to take market risk on the notes or to take our credit risk as issuer of the notes.

We urge you to consult your investment, legal, tax, accounting, and other advisors before you invest in the notes.

Hypothetical Payments at Maturity

The following examples are for purposes of illustration only. They are based on **hypothetical** values and show **hypothetical** payments on the notes. **The actual amount you receive and the resulting return will depend on the actual Starting Value, Threshold Value, Ending Value, Step Level, Step Payment, and the term of your investment.** The following examples do not take into account any tax consequences from investing in the notes. These examples are based on:

- 1) a Starting Value of 100;
- 2) a Threshold Value of 100;
- 3) a Step Level of 109.5;
- 4) a Step Payment of \$0.30 per unit (the midpoint of the Step Payment range of [\$0.10 to \$0.50] per unit);
- 5) an expected term of the notes of approximately one year and one week; and
- 6) the interest rate of 9.50% per year.

The **hypothetical** Starting Value of 100.00 used in these examples has been chosen for illustrative purposes only, and does not represent a likely actual Starting Value of the Underlying Stock. For recent actual prices of the Underlying Stock, see "The Underlying Stock" section below. In addition, all payments on the notes are subject to issuer credit risk.

Example 1

The Ending Value is 115 (115% of the Starting Value)

The Ending Value is greater than the Step Level. Consequently, in addition to the quarterly interest payments, you will receive on the maturity date the principal amount of your notes plus the Step Payment of \$0.30 per unit. The Redemption Amount per unit on the maturity date will therefore be equal to \$10.30 per unit (\$10.00 plus the Step Payment of \$0.30 per unit).

Example 2

The Ending Value is 105 (105% of the Starting Value)

The Ending Value is greater than the Starting Value and the Threshold Value but below the Step Level. Consequently, you will receive the quarterly interest payments, but you will not receive the Step Payment on the maturity date. The Redemption Amount per unit on the maturity date will therefore be equal to \$10.00.

Example 3

The Ending Value is 70 (70% of the Starting Value)

The Ending Value is less than the Starting Value and the Threshold Value. Consequently, you will receive the quarterly interest payments, but you will not receive the Step Payment on the maturity date, and you will participate on a 1-for-1 basis in the decrease in the price of the Underlying Stock. The Redemption Amount per unit will equal:

$$\$10 - \left[\$10 \times \left(\frac{100.00 - 70.00}{100.00} \right) \right] = \$7.00$$

On the maturity date, you will receive the Redemption Amount per unit of \$7.00

Summary of the Hypothetical Examples

	Example 1	Example 2	Example 3
	The Ending Value is greater than or equal to the Step Level	The Ending Value is less than the Step Level but greater than or equal to the Starting Value	The Ending Value is less than the Starting Value and the Threshold Value
Starting Value	100.00	100.00	100.00
Ending Value	115.00	105.00	70.00
Step Level	109.50	109.50	109.50
Threshold Value	100.00	100.00	100.00
Interest Rate (per year)	9.50%	9.50%	9.50%
Step Payment	\$0.30	\$0.00	\$0.00
Redemption Amount per Unit	\$10.30	\$10.00	\$7.00
Total Return of the Underlying Stock ⁽¹⁾	20.23%	10.23%	-24.77%
Total Return on the Notes ⁽²⁾	12.68%	9.68%	-20.32%

⁽¹⁾ The total return of the Underlying Stock assumes:

- (a) the percentage change in the price of the Underlying Stock from the Starting Value to the Ending Value;
- (b) a constant dividend yield of 5.13% per year; and
- (c) no transaction fees or expenses

⁽²⁾ The total return on the notes includes interest paid on the notes and assumes an expected term of the notes of approximately one year and one week.

Risk Factors

There are important differences between the notes and a conventional debt security. An investment in the notes involves significant risks, including those listed below. You should carefully review the more detailed explanation of risks relating to the notes in the “Risk Factors” sections beginning on page PS-6 of product supplement STEPS-1, page S-1 of the MTN prospectus supplement, and page 1 of the prospectus identified above. We also urge you to consult your investment, legal, tax, accounting, and other advisors before you invest in the notes.

- Depending on the performance of the Underlying Stock as measured shortly before the maturity date, your investment may result in a loss; there is no guaranteed return of principal.
- Your return on the notes may be less than the yield you could earn by owning a conventional fixed or floating rate debt security of comparable maturity.
- Payments on the notes are subject to our credit risk, and actual or perceived changes in our creditworthiness are expected to affect the value of the notes. If we become insolvent or are unable to pay our obligations, you may lose your entire investment.
- You will not receive a Step Payment at maturity unless the Ending Value is greater than or equal to the Step Level.
- Your investment return is limited to the return represented by the periodic interest payments over the term of the notes and the Step Payment, if any, and may be less than a comparable investment directly in the Underlying Stock.
- The initial estimated value of the notes is an estimate only, determined as of a particular point in time by reference to our and our affiliates' pricing models. These pricing models consider certain assumptions and variables, including our credit spreads, our internal funding rate on the pricing date, mid-market terms on hedging transactions, expectations on interest rates and volatility, price-sensitivity analysis, and the expected term of the notes. These pricing models rely in part on certain forecasts about future events, which may prove to be incorrect.
- The public offering price you pay for the notes will exceed the initial estimated value. If you attempt to sell the notes prior to maturity, their market value may be lower than the price you paid for them and lower than the initial estimated value. This is due to, among other things, changes in the price of the Underlying Stock, our internal funding rate, and the inclusion in the public offering price of the underwriting discount and the hedging related charge, all as further described in “Structuring the Notes” on page TS-10. These factors, together with various credit, market and economic factors over the term of the notes, are expected to reduce the price at which you may be able to sell the notes in any secondary market and will affect the value of the notes in complex and unpredictable ways.
- The initial estimated value does not represent a minimum or maximum price at which we, MLPF&S or any of our affiliates would be willing to purchase your notes in any secondary market (if any exists) at any time. The value of your notes at any time after issuance will vary based on many factors that cannot be predicted with accuracy, including the performance of the Underlying Stock, our creditworthiness and changes in market conditions.
- A trading market is not expected to develop for the notes. Neither we nor MLPF&S is obligated to make a market for, or to repurchase, the notes. There is no assurance that any party will be willing to purchase your notes at any price in any secondary market.
- Our business, hedging and trading activities, and those of MLPF&S and our respective affiliates (including trades in shares of the Underlying Stock), and any hedging and trading activities we, MLPF&S or our respective affiliates engage in for our clients' accounts, may affect the market value and return of the notes and may create conflicts of interest with you.
- The Underlying Company will have no obligations relating to the notes, and neither we nor MLPF&S will perform any due diligence procedures with respect to the Underlying Company in connection with this offering.
- You will have no rights of a holder of the Underlying Stock, and you will not be entitled to receive shares of the Underlying Stock or dividends or other distributions by the Underlying Company.
- The value of the Underlying Stock may not track the value of the common shares of the Underlying Company.
- Exchange rate movements may adversely impact the value of the Underlying Stock.
- Because the Underlying Company is based in Finland, adverse market conditions in Finland may negatively impact the value of the Underlying Stock.
- While we, MLPF&S or our respective affiliates may from time to time own securities of the Underlying Company, we, MLPF&S and our respective affiliates do not control the Underlying Company, and have not verified any disclosure made by the Underlying Company.
- The Redemption Amount will not be adjusted for all corporate events that could affect the Underlying Stock. See “Description of the Notes—Anti-Dilution Adjustments” beginning on page PS-20 of product supplement STEPS-1.
- There may be potential conflicts of interest involving the calculation agent, which is MLPF&S. We have the right to appoint and remove the calculation agent.
- The U.S. federal income tax consequences of the notes are uncertain, and may be adverse to a holder of the notes. See “Summary of U.S. Federal Income Tax Consequences” below and “U.S. Federal Income Tax Summary” beginning on page

PS-34 of product supplement STEPS-1. For a discussion of the Canadian federal income tax consequences of investing in the notes, see "Tax Consequences – Canadian Taxation" in the prospectus dated January 8, 2016.

The Underlying Stock

We have derived the following information from publicly available documents. We have not independently verified the accuracy or completeness of the following information. Nokia OYJ is a global mobile communications company that operates a network of production facilities for mobile products and network infrastructure, as well as a network of sales and customer service. The company also operates research and software development facilities worldwide.

Because the Underlying Stock is registered under the Securities Exchange Act of 1934, the Underlying Company is required to file periodically certain financial and other information specified by the SEC. Information provided to or filed with the SEC by the Underlying Company can be located at the Public Reference Section of the SEC, 100 F Street, N.E., Room 1580, Washington, D.C. 20549 or through the SEC's website at <http://www.sec.gov> by reference to SEC CIK number 924613.

This term sheet relates only to the notes and does not relate to the Underlying Stock or to any other securities of the Underlying Company. None of us, MLPF&S, or any of our respective affiliates has participated or will participate in the preparation of the Underlying Company's publicly available documents. None of us, MLPF&S, or any of our respective affiliates has made any due diligence inquiry with respect to the Underlying Company in connection with the offering of the notes. None of us, MLPF&S, or any of our respective affiliates makes any representation that the publicly available documents or any other publicly available information regarding the Underlying Company are accurate or complete. Furthermore, there can be no assurance that all events occurring prior to the date of this term sheet, including events that would affect the accuracy or completeness of these publicly available documents that would affect the trading price of the Underlying Stock, have been or will be publicly disclosed. Subsequent disclosure of any events or the disclosure of or failure to disclose material future events concerning the Underlying Company could affect the value of the Underlying Stock and therefore could affect your return on the notes. The selection of the Underlying Stock is not a recommendation to buy or sell the Underlying Stock.

The Underlying Stock trades on the New York Stock Exchange under the symbol "NOK." The shares of the Underlying Stock trade on the Nasdaq Helsinki Stock Exchange.

Historical Data

The following table shows the quarterly high and low Closing Market Prices of the shares of the Underlying Stock on its primary exchange from the first quarter of 2008 through August 22, 2016. We obtained this historical data from Bloomberg L.P. We have not independently verified the accuracy or completeness of the information obtained from Bloomberg L.P. These historical trading prices may have been adjusted to reflect certain corporate actions such as stock splits and reverse stock splits.

	High (\$)	Low (\$)
2008		
First Quarter	38.25	29.32
Second Quarter	34.02	24.03
Third Quarter	28.13	17.60
Fourth Quarter	18.50	12.35
2009		
First Quarter	16.21	8.74
Second Quarter	16.17	12.11
Third Quarter	16.00	12.25
Fourth Quarter	15.39	12.39
2010		
First Quarter	15.54	12.61
Second Quarter	15.65	8.02
Third Quarter	10.27	8.36
Fourth Quarter	11.28	9.23
2011		
First Quarter	11.73	7.89
Second Quarter	9.31	5.85
Third Quarter	6.63	4.88
Fourth Quarter	7.31	4.51
2012		
First Quarter	5.80	4.94
Second Quarter	5.47	2.07
Third Quarter	3.25	1.69
Fourth Quarter	4.21	2.55
2013		
First Quarter	4.70	3.26
Second Quarter	3.93	3.07
Third Quarter	6.71	3.83
Fourth Quarter	8.11	6.49
2014		

First Quarter	8.18	6.66
Second Quarter	8.33	7.03
Third Quarter	8.66	7.38
Fourth Quarter	8.51	7.67
2015		
First Quarter	8.08	7.43
Second Quarter	8.30	6.38
Third Quarter	7.05	5.87
Fourth Quarter	7.58	6.58
2016		
First Quarter	7.46	5.78
Second Quarter	6.25	5.08
Third Quarter (through August 22, 2016)	5.93	5.33

This historical data on the Underlying Stock is not necessarily indicative of the future performance of the Underlying Stock or what the value of the notes may be. Any historical upward or downward trend in the price per share of the Underlying Stock during any period set forth above is not an indication that the price per share of the Underlying Stock is more or less likely to increase or decrease at any time over the term of the notes.

Before investing in the notes, you should consult publicly available sources for the prices and trading pattern of the Underlying Stock.

Supplement to the Plan of Distribution

Under our distribution agreement with MLPF&S, MLPF&S will purchase the notes from us as principal at the public offering price indicated on the cover of this term sheet, less the indicated underwriting discount.

We may deliver the notes against payment therefor in New York, New York on a date that is greater than three business days following the pricing date. Under Rule 15c6-1 of the Securities Exchange Act of 1934, trades in the secondary market generally are required to settle in three business days, unless the parties to any such trade expressly agree otherwise. Accordingly, if the initial settlement of the notes occurs more than three business days from the pricing date, purchasers who wish to trade the notes more than three business days prior to the original issue date will be required to specify alternative settlement arrangements to prevent a failed settlement.

The notes will not be listed on any securities exchange. In the original offering of the notes, the notes will be sold in minimum investment amounts of 100 units. If you place an order to purchase the notes, you are consenting to MLPF&S acting as a principal in effecting the transaction for your account.

MLPF&S may repurchase and resell the notes, with repurchases and resales being made at prices related to then-prevailing market prices or at negotiated prices, and these will include MLPF&S's trading commissions and mark-ups. MLPF&S may act as principal or agent in these market-making transactions; however, it is not obligated to engage in any such transactions. At MLPF&S's discretion, for a short, undetermined initial period after the issuance of the notes, MLPF&S may offer to buy the notes in the secondary market at a price that may exceed the initial estimated value of the notes. Any price offered by MLPF&S for the notes will be based on then-prevailing market conditions and other considerations, including the performance of the Underlying Stock and the remaining term of the notes. However, neither we nor any of our affiliates is obligated to purchase your notes at any price or at any time, and we cannot assure you that we, MLPF&S or any of our respective affiliates will purchase your notes at a price that equals or exceeds the initial estimated value of the notes.

The value of the notes shown on your account statement will be based on MLPF&S's estimate of the value of the notes if MLPF&S or another of its affiliates were to make a market in the notes, which it is not obligated to do. That estimate will be based upon the price that MLPF&S may pay for the notes in light of then-prevailing market conditions and other considerations, as mentioned above, and will include transaction costs. At certain times, this price may be higher than or lower than the initial estimated value of the notes.

The distribution of the Note Prospectus in connection with these offers or sales will be solely for the purpose of providing investors with the description of the terms of the notes that was made available to investors in connection with their initial offering. Secondary market investors should not, and will not be authorized to, rely on the Note Prospectus for information regarding RBC or for any purpose other than that described in the immediately preceding sentence.

An investor's household, as referenced on the cover of this term sheet, will generally include accounts held by any of the following, as determined by MLPF&S in its discretion and acting in good faith based upon information then available to MLPF&S:

- the investor's spouse (including a domestic partner), siblings, parents, grandparents, spouse's parents, children and grandchildren, but excluding accounts held by aunts, uncles, cousins, nieces, nephews or any other family relationship not directly above or below the individual investor;
- a family investment vehicle, including foundations, limited partnerships and personal holding companies, but only if the beneficial owners of the vehicle consist solely of the investor or members of the investor's household as described above; and
- a trust where the grantors and/or beneficiaries of the trust consist solely of the investor or members of the investor's household as described above; provided that, purchases of the notes by a trust generally cannot be aggregated together with any purchases made by a trustee's personal account.

Purchases in retirement accounts will not be considered part of the same household as an individual investor's personal or other non-retirement account, except for individual retirement accounts ("IRAs"), simplified employee pension plans ("SEPs"), savings incentive match plan for employees ("SIMPLEs"), and single-participant or owners only accounts (i.e., retirement accounts held by self-employed individuals, business owners or partners with no employees other than their spouses).

Please contact your Merrill Lynch financial advisor if you have any questions about the application of these provisions to your specific circumstances or think you are eligible.

Structuring the Notes

The notes are our debt securities, the return on which is linked to the performance of the Underlying Stock. As is the case for all of our debt securities, including our market-linked notes, the economic terms of the notes reflect our actual or perceived creditworthiness at the time of pricing. In addition, because market-linked notes result in increased operational, funding and liability management costs to us, we typically borrow the funds under these notes at a rate that is more favorable to us than the rate that we might pay for a conventional fixed or floating rate debt security. That rate, which we refer to in this term sheet as our internal funding rate, is generally lower by an amount that we do not expect to exceed 0.50% per annum (equivalent to \$0.05 per unit). This generally relatively lower internal funding rate, which is reflected in the economic terms of the notes, along with the fees and charges associated with market-linked notes, typically results in the initial estimated value of the notes on the pricing date being less than their public offering price.

Payments on the notes, including the interest payments on the notes and the Redemption Amount, will be calculated based on the \$10 principal amount per unit. The Redemption Amount will depend on the performance of the Underlying Stock. In order to meet these payment obligations, at the time we issue the notes, we may choose to enter into certain hedging arrangements (which may include call options, put options or other derivatives) with MLPF&S or one of its affiliates. The terms of these hedging arrangements are determined by seeking bids from market participants, including MLPF&S and its affiliates, and take into account a number of factors, including our creditworthiness, interest rate movements, the volatility of the Underlying Stock, the tenor of the notes and the tenor of the hedging arrangements. The economic terms of the notes and their initial estimated value depend in part on the terms of these hedging arrangements.

MLPF&S has advised us that the hedging arrangements will include a hedging related charge of approximately \$0.075 per unit, reflecting an estimated profit to be credited to MLPF&S from these transactions. Since hedging entails risk and may be influenced by unpredictable market forces, additional profits and losses from these hedging arrangements may be realized by MLPF&S or any third party hedge providers.

For further information, see “Risk Factors—General Risks Relating to the Notes” beginning on page PS-6 and “Use of Proceeds and Hedging” on page PS-15 of product supplement STEPS-1.

Summary of Canadian Federal Income Tax Consequences

For a discussion of the material Canadian federal income tax consequences relating to an investment in the notes, please see the section entitled “Tax Consequences—Canadian Taxation” in the prospectus dated January 8, 2016.

Summary of U.S. Federal Income Tax Consequences

You should consider the U.S. federal income tax consequences of an investment in the notes, including the following:

- There is no statutory, judicial, or administrative authority directly addressing the characterization of the notes.
- You agree with us (in the absence of an administrative determination, or judicial ruling to the contrary) to characterize and treat the notes for all tax purposes as an income-bearing pre-paid cash settled derivative contract linked to the Underlying Stock.
- Under this characterization and tax treatment of the notes, we intend to take the position that the stated periodic interest payments constitute taxable ordinary income to a U.S. holder (as defined on page 27 of the prospectus) at the time received or accrued in accordance with the U.S. holder's regular method of accounting. Upon receipt of a cash payment at maturity or upon a sale or exchange of the notes prior to maturity (other than amounts representing accrued stated periodic interest payments), a U.S. holder generally will recognize capital gain or loss. This capital gain or loss generally will be long-term capital gain or loss if you hold the notes for more than one year.
- No assurance can be given that the Internal Revenue Service or any court will agree with this characterization and tax treatment.

You should consult your own tax advisor concerning the U.S. federal income tax consequences to you of acquiring, owning, and disposing of the notes, as well as any tax consequences arising under the laws of any state, local, foreign, or other tax jurisdiction and the possible effects of changes in U.S. federal or other tax laws. You should review carefully the discussion under the section entitled "U.S. Federal Income Tax Summary" beginning on page PS-34 of product supplement STEPS-1.

Where You Can Find More Information

We have filed a registration statement (including a product supplement, a prospectus supplement, and a prospectus) with the SEC for the offering to which this term sheet relates. Before you invest, you should read the Note Prospectus, including this term sheet, and the other documents that we have filed with the SEC, for more complete information about us and this offering. You may get these documents without cost by visiting EDGAR on the SEC website at www.sec.gov. Alternatively, we, any agent, or any dealer participating in this offering will arrange to send you these documents if you so request by calling MLPF&S toll-free at 1-800-294-1322.

Market-Linked Investments Classification

MLPF&S classifies certain market-linked investments (the "Market-Linked Investments") into categories, each with different investment characteristics. The following description is meant solely for informational purposes and is not intended to represent any particular Enhanced Income Market-Linked Investment or guarantee any performance.

Enhanced Income Market-Linked Investments are short- to medium-term market-linked notes that offer you a way to enhance your income stream, either through variable or fixed-interest coupons, an added payout at maturity based on the performance of the linked asset, or both. In exchange for receiving current income, you will generally forfeit upside potential on the linked asset. Even so, the prospect of higher interest payments and/or an additional payout may equate to a higher return potential than you may be able to find through other fixed-income securities. Enhanced Income Market-Linked Investments generally do not include market downside protection. The degree to which your principal is repaid at maturity is generally determined by the performance of the linked asset. Although enhanced income streams may help offset potential declines in the asset, you can still lose part or all of your original investment.

"STEP Income Securities®" and "STEPS®" are the registered service marks of Bank of America Corporation, the parent company of MLPF&S.



STEP Income Securities® Linked to a Single Equity Security

- The STEP Income Securities® (the “**notes**”) are unsecured senior debt securities issued by Royal Bank of Canada. All payments due on the notes, including any repayment of principal, will be subject to the credit risk of Royal Bank of Canada.
- The notes do not guarantee the return of principal at maturity. Instead, the return on the notes will be based on the performance of an underlying “**Market Measure**,” which will be the common equity securities of a company other than us, the agents, and our respective affiliates (the “**Underlying Stock**”).
- The notes pay a fixed interest rate over their term and provide an opportunity to earn an additional fixed payment at maturity (the “**Step Payment**”). However, your payment at maturity will be exposed to any negative performance of the Underlying Stock below the Threshold Value (as defined below) on a 1-to-1 basis.
- If the value of the Underlying Stock increases from its Starting Value to an Ending Value (each as defined below) that is greater than or equal to a specified “**Step Level**,” the cash payment per unit at maturity (the “**Redemption Amount**”) will equal the principal amount plus the Step Payment. Your maximum return on the notes will equal the interest payments plus the Step Payment, if any.
- If the Ending Value is less than the Step Level, but greater than or equal to the Threshold Value, you will receive your principal amount at maturity. However, if the Ending Value is less than the Threshold Value, you will be subject to 1-to-1 downside exposure to the decrease of the Underlying Stock below the Threshold Value. In such case, you may lose all or a significant portion of the principal amount of your notes.
- This product supplement describes the general terms of the notes, the risk factors to consider before investing, the general manner in which they may be offered and sold, and other relevant information.
- For each offering of the notes, we will provide you with a pricing supplement (which we refer to as a “**term sheet**”) that will describe the specific terms of that offering, including the specific Underlying Stock, the Threshold Value, the Step Level, the Step Payment, the interest rate, the interest payment dates, and certain risk factors. The term sheet will identify, if applicable, any additions or changes to the terms specified in this product supplement.
- The notes will be issued in denominations of whole units. Unless otherwise set forth in the applicable term sheet, each unit will have a principal amount of \$10. The term sheet may also set forth a minimum number of units that you must purchase.
- Unless otherwise specified in the applicable term sheet, the notes will not be listed on a securities exchange or quotation system.
- Merrill Lynch, Pierce, Fenner & Smith Incorporated (“**MLPF&S**”) and one or more of its affiliates may act as our agents to offer the notes and will act in a principal capacity in such role.

*The notes are unsecured and are not savings accounts or insured deposits of a bank. The notes are not insured by the Canada Deposit Insurance Corporation, the U.S. Federal Deposit Insurance Corporation (the “**FDIC**”) or any other Canadian or U.S. governmental agency or instrumentality. Potential purchasers of the notes should consider the information in “Risk Factors” beginning on page PS-6 of this product supplement, page S-1 of the accompanying Series G prospectus supplement, and page 1 of the accompanying prospectus. **You may lose all or a significant portion of your investment in the notes.***

*None of the Securities and Exchange Commission (the “**SEC**”), any state securities commission, or any other regulatory body has approved or disapproved of these securities or passed upon the adequacy or accuracy of this product supplement, the prospectus supplement, or the prospectus. Any representation to the contrary is a criminal offense.*

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“**STEP** Income **S**ecurities®” and “**STEPS**” are registered service marks of Bank of America Corporation, the parent corporation of MLPF&S.

SUMMARY

The information in this “Summary” section is qualified in its entirety by the more detailed explanation set forth elsewhere in this product supplement, the prospectus supplement, and the prospectus, as well as the applicable term sheet. Neither we nor MLPF&S have authorized any other person to provide you with any information different from the information set forth in these documents. If anyone provides you with different or inconsistent information about the notes, you should not rely on it.

Key Terms:

General:

The notes are senior debt securities issued by Royal Bank of Canada, and are not guaranteed or insured by the Canada Deposit Insurance Corporation or the FDIC or secured by collateral. They rank equally with all of our other unsecured senior debt from time to time outstanding. **All payments due on the notes, including any repayment of principal, are subject to our credit risk.**

The return on the notes will be based on the performance of an Underlying Stock, and there is no guaranteed return of principal at maturity. Therefore, you may lose all or a significant portion of your investment if the value of the Underlying Stock decreases from the Starting Value to an Ending Value that is less than the Threshold Value.

Each issue of the notes will mature on the date set forth in the applicable term sheet. We cannot redeem the notes at any earlier date, except under the limited circumstances set forth below. We will make periodic interest payments on the notes at the fixed rate specified in the applicable term sheet.

Underlying Stock:

The common equity securities of a company (the “**Underlying Company**”) represented either by a class of equity securities registered under the Securities Exchange Act of 1934, as amended (the “**Exchange Act**”), or by American Depositary Receipts (“**ADRs**”) registered under the Exchange Act.

Underlying Stock Performance:

The performance of the Underlying Stock will be measured according to the percentage change of the Underlying Stock from its Starting Value to its Ending Value.

Unless otherwise specified in the applicable term sheet:

The “**Starting Value**” will be the price of the Underlying Stock on the date when the notes are priced for initial sale to the public (the “**pricing date**”), determined as set forth in the applicable term sheet.

The “**Threshold Value**” will be a price of the Underlying Stock that equals a specified percentage (100% or less) of the Starting Value. The Threshold Value will be determined on the pricing date and set forth in the term sheet. If the Threshold Value is equal to 100% of the Starting Value, you will be exposed to any decrease in the value of the Underlying Stock from the Starting Value to the Ending Value on a 1-to-1 basis, and you may lose all of your investment in the notes.

The “**Ending Value**” will equal the Closing Market Price (as defined below) of the Underlying Stock on the valuation date multiplied by the Price Multiplier (as defined below).

If a Market Disruption Event (as defined below) occurs and is continuing on the valuation date, or if certain other events occur, the calculation agent will determine the Ending Value as set forth in the section “Description of the Notes—The Starting Value and the Ending Value—Ending Value.”

Price Multiplier:

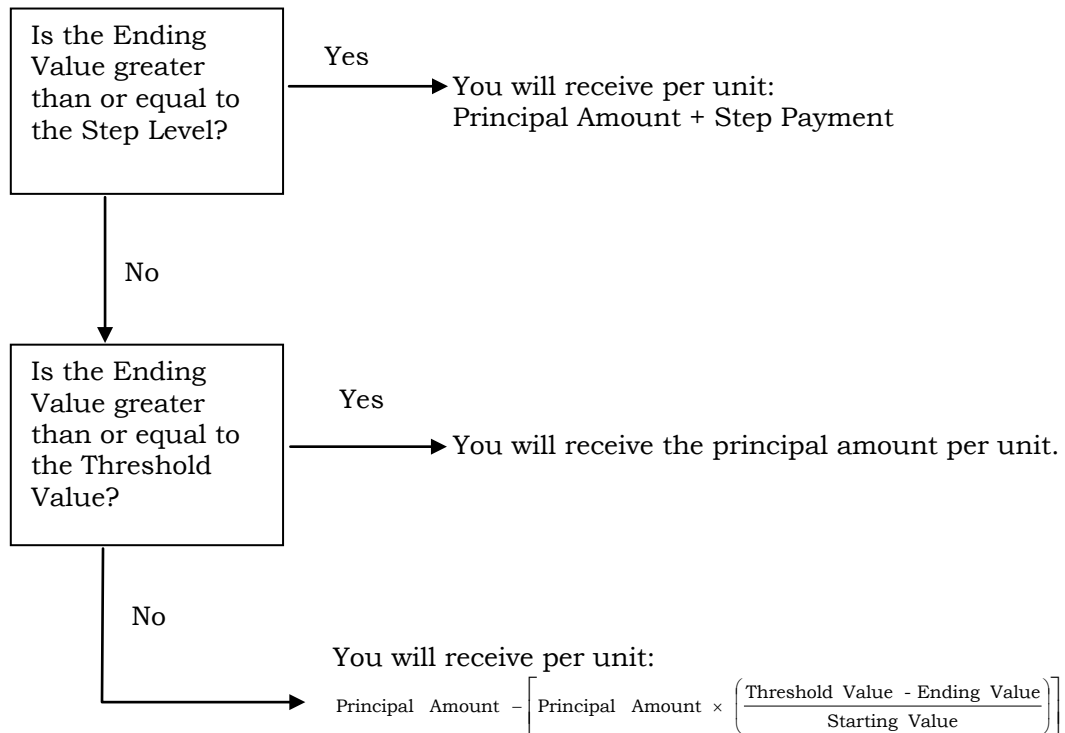
Unless otherwise set forth in the term sheet, the “**Price Multiplier**” for each Underlying Stock will be 1, and will be subject to adjustment for certain corporate events relating to an Underlying Stock described below under “Description of the Notes—Anti-Dilution Adjustments.”

Redemption Amount at Maturity:

At maturity, you will receive a Redemption Amount that will equal the principal amount plus the Step Payment if the Ending Value is greater than or equal to the Step Level. If the Ending Value is less than the Step Level, but is greater than or equal to the Threshold Value, then the Redemption Amount will equal the principal amount. If the Ending Value is less than the Threshold Value, you will be subject to 1-to-1 downside exposure to the decrease of the Underlying Stock below the Threshold Value, and will receive a Redemption Amount that is less than the principal amount.

All payments due on the notes, including any repayment of principal, are subject to our credit risk as issuer of the notes.

The Redemption Amount, denominated in U.S. dollars, will be calculated as follows:



Principal at Risk:

You may lose all or a significant portion of the principal amount of the notes. Further, if you sell your notes prior to maturity, you may find that the market value per note is less than the price that you paid for the notes.

Calculation Agent:

The calculation agent will make all determinations associated with the notes. Unless otherwise set forth in the applicable term sheet, we will appoint MLPF&S or one of its affiliates to act as calculation agent for the notes. See the section entitled “Description of the Notes—Role of the Calculation Agent.”

Agents: MLPF&S and one or more of its affiliates will act as our agents in connection with each offering of the notes and will receive an underwriting discount based on the number of units of the notes sold. None of the agents is your fiduciary or advisor solely as a result of the making of any offering of the notes, and you should not rely upon this product supplement, the term sheet, or the accompanying prospectus or prospectus supplement as investment advice or a recommendation to purchase the notes.

Listing: Unless otherwise specified in the applicable term sheet, the notes will not be listed on a securities exchange or quotation system.

This product supplement relates only to the notes and does not relate to the Underlying Stock described in any term sheet. You should read carefully the entire prospectus, prospectus supplement, and product supplement, together with the applicable term sheet, to understand fully the terms of your notes, as well as the tax and other considerations important to you in making a decision about whether to invest in any notes. In particular, you should review carefully the sections in this product supplement and the accompanying prospectus supplement entitled “Risk Factors,” which highlight a number of risks of an investment in the notes, to determine whether an investment in the notes is appropriate for you. If information in this product supplement is inconsistent with the prospectus or prospectus supplement, this product supplement will supersede those documents. However, if information in any term sheet is inconsistent with this product supplement, that term sheet will supersede this product supplement.

Neither we nor any agent is making an offer to sell the notes in any jurisdiction where the offer or sale is not permitted.

Certain capitalized terms used and not defined in this product supplement have the meanings ascribed to them in the prospectus supplement and prospectus. Unless otherwise indicated or unless the context requires otherwise, all references in this product supplement to “we,” “us,” “our,” or similar references are to Royal Bank of Canada.

You are urged to consult with your own attorneys and business and tax advisors before making a decision to purchase any notes.

RISK FACTORS

Your investment in the notes is subject to investment risks, many of which differ from those of a conventional debt security. Your decision to purchase the notes should be made only after carefully considering the risks, including those discussed below, in light of your particular circumstances. The notes are not an appropriate investment for you if you are not knowledgeable about the material terms of the notes or investments in equity or equity-based securities in general.

General Risks Relating to the Notes

Your investment may result in a loss; there is no guaranteed return of principal.

There is no fixed principal repayment amount on the notes at maturity. The return on the notes will be based on the performance of the Underlying Stock and therefore, you may lose all or a significant portion of your investment if the value of the Underlying Stock decreases from the Starting Value to an Ending Value that is less than the Threshold Value. If the Threshold Value is equal to 100% of the Starting Value, the Redemption Amount could be zero and you may lose all of the principal amount of your notes.

You will not receive a Step Payment at maturity unless the Ending Value of the Underlying Stock is greater than or equal to the Step Level on the valuation date. If the Ending Value of your notes is less than the Step Level on the valuation date, you will not receive a Step Payment on the maturity date. This will be the case even if the value of the Underlying Stock to which your notes are linked is equal to or greater than the Step Level at certain points during the term of the notes.

Your return on the notes may be less than the yield on a conventional fixed or floating rate debt security of comparable maturity. Any return that you receive on the notes may be less than the return you would earn if you purchased a conventional debt security with the same maturity date. As a result, your investment in the notes may not reflect the full opportunity cost to you when you consider factors, such as inflation, that affect the time value of money.

Your investment return is limited to the return represented by the periodic interest payments over the term of the notes and the Step Payment, if any, and may be less than a comparable investment directly in the Underlying Stock. Your return on the notes is based on the periodic interest payments over the term of the notes and on the performance of the Underlying Stock from the Starting Value to the Ending Value. However, your return on the notes will never exceed the sum of (i) the periodic interest payments over the term of the notes and (ii) the Step Payment, if any, at maturity, regardless of the extent to which the Ending Value exceeds the Step Level. In contrast, a direct investment in the Underlying Stock would allow you to receive the full benefit of any appreciation in the value of the Underlying Stock.

In addition, unless otherwise set forth in the applicable term sheet or in this product supplement under “Description of the Notes—Anti-Dilution Adjustments,” the Ending Value will not reflect the value of dividends paid, or distributions made, on the Underlying Stock, or any other rights associated with the Underlying Stock. Your return on the notes will not reflect the return you would realize if you actually owned shares of the Underlying Stock.

Payments on the notes are subject to our credit risk, and actual or perceived changes in our creditworthiness are expected to affect the value of the notes. The notes are our senior unsecured debt securities. As a result, your receipt of the interest payments on the notes and the Redemption Amount at maturity is dependent upon our ability to repay our obligations on the applicable payment dates, regardless of whether the Underlying Stock

increases from the Starting Value to the Ending Value. No assurance can be given as to what our financial condition will be on any payment date. If we become unable to meet our financial obligations as they become due, you may not receive the amounts payable under the terms of the notes.

In addition, our credit ratings are an assessment by ratings agencies of our ability to pay our obligations. Consequently, our perceived creditworthiness and actual or anticipated decreases in our credit ratings or increases in the spread between the yield on our securities and the yield on U.S. Treasury securities (the “**credit spread**”) prior to the maturity date may adversely affect the market value of the notes. However, because your return on the notes depends upon factors in addition to our ability to pay our obligations, such as the value of the Underlying Stock, an improvement in our credit ratings will not reduce the other investment risks related to the notes.

The initial estimated value of the notes considers certain assumptions and variables and relies in part on certain forecasts about future events, which may prove to be incorrect. The initial estimated value of the notes, which will be set forth in the applicable term sheet, is an estimate only, determined as of a particular point in time by reference to our and our affiliates’ pricing models. These pricing models consider certain assumptions and variables, including our credit spreads, our internal funding rate on the pricing date, mid-market terms on hedging transactions, expectations on interest rates, and volatility, price-sensitivity analysis, and the expected term of the notes. These pricing models rely in part on certain forecasts about future events, which may prove to be incorrect.

The public offering price you pay for the notes will exceed the initial estimated value. If you attempt to sell the notes prior to maturity, their market value may be lower than the price you paid for them and lower than the initial estimated value. This is due to, among other things, changes in the value of the Underlying Stock, our internal funding rate, and the inclusion in the public offering price of the underwriting discount and an expected hedging related charge. These factors, together with various credit, market and economic factors over the term of the notes, are expected to reduce the price at which you may be able to sell the notes in any secondary market and will affect the value of the notes in complex and unpredictable ways.

The initial estimated value does not represent a minimum or maximum price at which we, MLPF&S or any of our affiliates would be willing to purchase your notes in any secondary market (if any exists) at any time. The value of your notes at any time after issuance will vary based on many factors that cannot be predicted with accuracy, including the performance of the Underlying Stock, our creditworthiness and changes in market conditions.

We cannot assure you that there will be a trading market for your notes. If a secondary market exists, we cannot predict how the notes will trade, or whether that market will be liquid or illiquid. The development of a trading market for the notes will depend on various factors, including our financial performance and changes in the value of the Underlying Stock. The number of potential buyers of your notes in any secondary market may be limited. There is no assurance that any party will be willing to purchase your notes at any price in any secondary market.

We anticipate that one or more of the agents will act as a market-maker for the notes that it offers, but none of them is required to do so and may cease to do so at any time. Any price at which an agent may bid for, offer, purchase, or sell any notes may be higher or lower than the applicable public offering price, and that price may differ from the values determined by pricing models that it may use, whether as a result of dealer discounts, mark-ups, or other

transaction costs. These bids, offers, or transactions may affect the prices, if any, at which the notes might otherwise trade in the market. In addition, if at any time any agent were to cease acting as a market-maker for any issue of the notes, it is likely that there would be significantly less liquidity in that secondary market. In such a case, the price at which those notes could be sold likely would be lower than if an active market existed.

Unless otherwise stated in the term sheet, we will not list the notes on any securities exchange. Even if an application were made to list your notes, we cannot assure you that the application will be approved or that your notes will be listed and, if listed, that they will remain listed for their entire term. The listing of the notes on any securities exchange will not necessarily ensure that a trading market will develop, and if a trading market does develop, that there will be liquidity in the trading market.

The Redemption Amount will not reflect changes in the value of the Underlying Stock other than on the valuation date. Changes in the value of the Underlying Stock during the term of the notes other than on the applicable valuation date will not be reflected in the calculation of the Redemption Amount. To calculate the Redemption Amount, the calculation agent will compare only the Ending Value to the Step Level and the Threshold Value. No other values of the Underlying Stock will be taken into account. As a result, even if the value of the Underlying Stock has increased at certain times during the term of the notes, you will receive a Redemption Amount that is less than the principal amount if the Ending Value is less than the Threshold Value.

If you attempt to sell the notes prior to maturity, their market value, if any, will be affected by various factors that interrelate in complex ways, and their market value may be less than the principal amount. The limited protection against the risk of losses provided by the Threshold Value, if any, will only apply if you hold the notes to maturity. You have no right to have your notes redeemed prior to maturity. If you wish to liquidate your investment in the notes prior to maturity, your only option would be to sell them. At that time, there may be an illiquid market for the notes or no market at all. Even if you were able to sell the notes, there are many factors outside of our control that may affect their market value, some of which, but not all, are stated below. The impact of any one factor may be offset or magnified by the effect of another factor. The following paragraphs describe a specific factor's expected impact on the market value of the notes, assuming all other conditions remain constant.

- **Value of the Underlying Stock.** We anticipate that the market value of the notes prior to maturity generally will depend to a significant extent on the value of the Underlying Stock. In general, it is expected that the market value of the notes will decrease as the value of the Underlying Stock decreases, and increase as the value of the Underlying Stock increases (up to the Step Level). However, as the value of the Underlying Stock increases or decreases, the market value of the notes is not expected to increase or decrease at the same rate. If you sell your notes when the value of the Underlying Stock is less than, or not sufficiently above, the applicable Starting Value, then you may receive less than the principal amount of your notes.

In addition, we do not expect that the notes will trade in any secondary market at a price that is greater than the sum of the principal amount, the value of any remaining interest payments and the applicable Step Payment.

- **Volatility of the Underlying Stock.** Volatility is the term used to describe the size and frequency of market fluctuations. Increases or decreases in the volatility of the Underlying Stock may have an adverse impact on the market value of the notes. Even if

the value of the Underlying Stock increases after the applicable pricing date, if you are able to sell your notes before their maturity date, you may receive substantially less than the amount that would be payable at maturity based on that value because of the anticipation that the value of the Underlying Stock will continue to fluctuate until the Ending Value is determined.

- **Economic and Other Conditions Generally.** The general economic conditions of the capital markets in the United States, as well as geopolitical conditions and other financial, political, regulatory, and judicial events and related uncertainties that affect stock markets generally, may affect the value of the Underlying Stock and the market value of the notes.
- **Interest Rates.** We expect that changes in interest rates will affect the market value of the notes. In general, if U.S. interest rates increase, we expect that the market value of the notes will decrease, and conversely, if U.S. interest rates decrease, we expect that the market value of the notes will increase. In general, we expect that the longer the amount of time that remains until maturity, the more significant the impact of these changes will be on the value of the notes. The level of interest rates also may affect the U.S. economy and any applicable market outside of the U.S., and, in turn, the value of the Underlying Stock, and, thus, the market value of the notes may be adversely affected. If the Underlying Stock is an ADR, the level of interest rates in the relevant foreign country may affect the economy of that foreign country and, in turn, the value of the ADR, and, thus, the market value of the notes may be adversely affected.
- **Dividend Yields.** In general, if the cumulative dividend yield on the Underlying Stock increases, we anticipate that the market value of the notes will decrease; conversely, if that dividend yield decreases, we anticipate that the market value of your notes will increase.
- **Our Financial Condition and Creditworthiness.** Our perceived creditworthiness, including any increases in our credit spreads and any actual or anticipated decreases in our credit ratings, may adversely affect the market value of the notes. In general, we expect the longer the amount of time that remains until maturity, the more significant the impact will be on the value of the notes. However, a decrease in our credit spreads or an improvement in our credit ratings will not necessarily increase the market value of the notes.
- **Time to Maturity.** There may be a disparity between the market value of the notes prior to maturity and their value at maturity. This disparity is often called a time “value,” “premium,” or “discount,” and reflects expectations concerning the value of the Underlying Stock prior to the maturity date. As the time to maturity decreases, this disparity may decrease, such that the value of the notes will approach the expected Redemption Amount and the interest payment to be paid at maturity.

Trading and hedging activities by us, the agents, and our respective affiliates may affect your return on the notes and their market value. We, the agents, and our respective affiliates may buy or sell shares of the Underlying Stock, futures or options contracts on the Underlying Stock, or other listed or over-the counter derivative instruments linked to the Underlying Stock. We may execute such purchases or sales for our own or their own accounts, for business reasons, or in connection with hedging our obligations under the notes. These transactions could affect the value of an Underlying Stock in a manner that could be adverse to your investment in the notes. On or before the applicable pricing date, any purchases by us, the agents, and our respective affiliates, or others on our or their behalf may increase the value

of the Underlying Stock. Consequently, the value of that Underlying Stock may decrease subsequent to the pricing date of an issue of the notes, adversely affecting the-market value of the notes.

We, the agents, or one or more of our respective affiliates may also engage in hedging activities that could increase the value of the Underlying Stock on the applicable pricing date. In addition, these activities may decrease the market value of your notes prior to maturity, including on the valuation date, and may reduce the Redemption Amount.

We, the agents, or one or more of our respective affiliates may purchase or otherwise acquire a long or short position in the notes, and may hold or resell the notes. For example, the agents may enter into these transactions in connection with any market making activities in which they engage. We cannot assure you that these activities will not adversely affect the value of the Underlying Stock, the market value of your notes prior to maturity or the Redemption Amount.

Our trading, hedging and other business activities, and those of the agents, may create conflicts of interest with you. We, the agents, or one or more of our respective affiliates may engage in trading activities related to the Underlying Stock that are not for your account or on your behalf. We, the agents, or one or more of our respective affiliates also may issue or underwrite other financial instruments with returns based upon the applicable Underlying Stock. These trading and other business activities may present a conflict of interest between your interest in the notes and the interests we, the agents, and our respective affiliates may have in our proprietary accounts, in facilitating transactions, including block trades, for our or their other customers, and in accounts under our or their management. These trading and other business activities, if they influence the value of the Underlying Stock or secondary trading in your notes, could be adverse to your interests as a beneficial owner of the notes.

We, the agents, and our respective affiliates expect to enter into arrangements or adjust or close out existing transactions to hedge our obligations under the notes. We, the agents, or our respective affiliates also may enter into hedging transactions relating to other notes or instruments that we or they issue, some of which may have returns calculated in a manner related to that of a particular issue of the notes. We may enter into such hedging arrangements with one or more of our subsidiaries or affiliates, or with one or more of the agents or their affiliates. Such a party may enter into additional hedging transactions with other parties relating to the notes and the applicable Underlying Stock. This hedging activity is expected to result in a profit to those engaging in the hedging activity, which could be more or less than initially expected, or the hedging activity could also result in a loss. We, the agents, and our respective affiliates will price these hedging transactions with the intent to realize a profit, regardless of whether the value of the notes increases or decreases. Any profit in connection with such hedging activities will be in addition to any other compensation that we, the agents, and our respective affiliates receive for the sale of the notes, which creates an additional incentive to sell the notes to you.

There may be potential conflicts of interest involving the calculation agent. We may appoint and remove the calculation agent. We expect to appoint MLPF&S or one of its affiliates as the calculation agent for the notes and, as such, it will determine the Starting Value, the Threshold Value, the Step Level, the Ending Value and the Redemption Amount. As the calculation agent, MLPF&S or one of its affiliates will have discretion in making various determinations that affect your notes. The exercise of this discretion by the calculation agent could adversely affect the value of your notes and may present the calculation agent with a conflict of interest of the kind described under “—Trading and hedging activities by us, the agents, and our respective affiliates may affect your return on the notes and their market

value” and “—Our trading, hedging and other business activities, and those of the agents, may create conflicts of interest with you” above.

Significant aspects of the U.S. federal income tax treatment of the notes are uncertain. The tax treatment of the notes is uncertain. We do not plan to request a ruling from the Internal Revenue Service (the “IRS”) regarding the tax treatment of the notes, and the IRS or a court may not agree with the tax treatment described in this product supplement. Although the U.S. federal income tax treatment of the stated periodic interest payments is uncertain, we intend to take the position that the stated periodic interest payments constitute taxable ordinary income to a U.S. holder at the time received or accrued in accordance with the holder’s regular method of accounting.

The IRS has issued a notice indicating that it and the Treasury Department are actively considering whether, among other issues, the holder of an instrument such as the notes should be required to accrue ordinary income on a current basis, and they are seeking comments on the subject. The outcome of this process is uncertain and could apply on a retroactive basis.

Please read carefully the section entitled “U.S. Federal Income Tax Summary” in this product supplement. You should consult your tax advisor about your own tax situation.

A 30% U.S. federal withholding tax will be withheld on the stated periodic interest payments paid to non-U.S. holders. While the U.S. federal income tax treatment of the notes (including proper characterization of the stated periodic interest payments for U.S. federal income tax purposes) is uncertain, U.S. federal income tax at a 30% rate (or at a lower rate under an applicable income tax treaty) will be withheld in respect of the stated periodic interest payments made to a non-U.S. holder unless such payments are effectively connected with the conduct by the non-U.S. holder of a trade or business in the U.S. We will not pay any additional amounts in respect of such withholding.

Please read carefully the section entitled “U.S. Federal Income Tax Summary” in this product supplement. You should consult your tax advisor about your own tax situation.

Risks Relating to the Underlying Stock

You must rely on your own evaluation of the merits of an investment linked to the applicable Underlying Stock. In the ordinary course of business, we, the agents, and our respective affiliates may have expressed views on expected movements in an Underlying Stock, and may do so in the future. These views or reports may be communicated to our clients and clients of these entities. However, these views are subject to change from time to time. Moreover, other professionals who deal in markets relating to an Underlying Stock may at any time have significantly different views from our views and the views of these entities. For these reasons, you are encouraged to derive information concerning an Underlying Stock from multiple sources, and you should not rely on our views or the views expressed by these entities.

You will have no rights as a security holder, you will have no rights to receive any shares of the Underlying Stock, and you will not be entitled to dividends or other distributions by the Underlying Company. The notes are our debt securities. They are not equity instruments, shares of stock, or securities of any other issuer. Investing in the notes will not make you a holder of the Underlying Stock. You will not have any voting rights, any rights to receive dividends or other distributions, or any other rights with respect to the Underlying Stock. As a result, the return on your notes may not reflect the return you would

realize if you actually owned shares of the Underlying Stock and received the dividends paid or other distributions made in connection with them. Your notes will be paid in cash and you have no right to receive any shares of the Underlying Stock.

If shares of the Underlying Company are also listed on a foreign exchange, your return may be affected by factors affecting international securities markets. The value of securities traded outside of the U.S. may be adversely affected by a variety of factors relating to the relevant securities markets. Factors which could affect those markets, and therefore the return on your notes, include:

- **Market Liquidity and Volatility.** The relevant foreign securities markets may be less liquid and/or more volatile than U.S. or other securities markets and may be affected by market developments in different ways than U.S. or other securities markets.
- **Political, Economic, and Other Factors.** The prices and performance of securities of companies in foreign countries may be affected by political, economic, financial, and social factors in those regions. Direct or indirect government intervention to stabilize a particular securities market and cross-shareholdings in companies in the relevant foreign markets may affect prices and the volume of trading in those markets. In addition, recent or future changes in government, economic, and fiscal policies in the relevant jurisdictions, the possible imposition of, or changes in, currency exchange laws, or other laws or restrictions, and possible fluctuations in the rate of exchange between currencies, are factors that could negatively affect the relevant securities markets. The relevant foreign economies may differ from the U.S. economy in economic factors such as growth of gross national product, rate of inflation, capital reinvestment, resources, and self-sufficiency.

In particular, many emerging nations are undergoing rapid change, involving the restructuring of economic, political, financial and legal systems. Regulatory and tax environments may be subject to change without review or appeal, and many emerging markets suffer from underdevelopment of capital markets and tax systems. In addition, in some of these nations, issuers of the relevant securities face the threat of expropriation of their assets, and/or nationalization of their businesses. The economic and financial data about some of these countries may be unreliable.

Unless otherwise set forth in the applicable term sheet, we and the agents do not control the Underlying Company and have not verified any disclosure made by any other Underlying Company. We, the agents, or our respective affiliates currently, or in the future, may engage in business with the Underlying Company, and we, the agents, or our respective affiliates may from time to time own securities of the Underlying Company. However, none of us, the agents, or any of our respective affiliates has the ability to control any actions of the Underlying Company or have undertaken any independent review of, or made any due diligence inquiry with respect to, the Underlying Company. You should make your own investigation into the Underlying Stock.

Our business activities and those of the agents relating to the Underlying Company may create conflicts of interest with you. We, the agents and our respective affiliates, at the time of any offering of the notes or in the future, may engage in business with the Underlying Company, including making loans to, equity investments in, or providing investment banking, asset management, or other services to the Underlying Company, its affiliates, and its competitors.

In connection with these activities, any of these entities may receive information about those companies that we will not divulge to you or other third parties. We, the agents, and our respective affiliates have published, and in the future may publish, research reports on one or more of these companies. The agents may also publish research reports relating to our or our affiliates' securities, including the notes. This research is modified from time to time without notice and may express opinions or provide recommendations that are inconsistent with purchasing or holding your notes. Any of these activities may affect the value of the Underlying Stock and, consequently, the market value of your notes. None of us, the agents, or our respective affiliates makes any representation to any purchasers of the notes regarding any matters whatsoever relating to the Underlying Company. Any prospective purchaser of the notes should undertake an independent investigation of the Underlying Company to the extent that, in its judgment, is appropriate to make an informed decision regarding an investment in the notes. The selection of the Underlying Stock does not reflect any investment recommendations from us, the agents, or our respective affiliates.

The Underlying Company will have no obligations relating to the notes and we will not perform any due diligence procedures with respect to the Underlying Company. The Underlying Company will not have any financial or legal obligation with respect to the notes or the amounts to be paid to you, including any obligation to take our needs or the needs of noteholders into consideration for any reason, including taking any corporate actions that might affect the value of the Underlying Stock or the value of the notes. The Underlying Company will not receive any of the proceeds from any offering of the notes, and will not be responsible for, or participate in, the offering of the notes. No Underlying Company will be responsible for, or participate in, the determination or calculation of the amount receivable by holders of the notes.

None of us, the agents, or any of our respective affiliates will conduct any due diligence inquiry with respect to the Underlying Stock in connection with an offering of the notes. None of us, the agents, or any of our respective affiliates has made any independent investigation as to the completeness or accuracy of publicly available information regarding the Underlying Company or as to the future performance of the Underlying Stock. Any prospective purchaser of the notes should undertake such independent investigation of the Underlying Company as in its judgment is appropriate to make an informed decision with respect to an investment in the notes.

The Redemption Amount will not be adjusted for all corporate events that could affect the Underlying Company. The Price Multiplier, Ending Value, Redemption Amount and other terms of the notes may be adjusted for the specified corporate events affecting the Underlying Stock, as described in the section entitled "Description of the Notes—Anti-Dilution Adjustments." However, these adjustments do not cover all corporate events that could affect the market price of an Underlying Stock, such as offerings of common shares for cash or in connection with certain acquisition transactions. The occurrence of any event that does not require the calculation agent to adjust the applicable Price Multiplier or the amount payable to you at maturity may adversely affect the Closing Market Price of the Underlying Stock, the Ending Value, and the Redemption Amount, and, as a result, the market value of the notes.

Risks Relating to Underlying Stocks that Are ADRs

The value of an ADR may not accurately track the value of the common shares of the related Underlying Company. If the Underlying Stock is an ADR, each ADR will represent shares of the relevant Underlying Company. Generally, the ADRs are issued under a deposit agreement that sets forth the rights and responsibilities of the depositary, the Underlying Company and the holders of the ADRs. The trading patterns of the ADRs will generally reflect the characteristics and valuations of the underlying common shares; however, the value of the

ADRs may not completely track the value of those shares. There are important differences between the rights of holders of ADRs and the rights of holders of the underlying common shares. In addition, trading volume and pricing on the applicable non-U.S. exchange may, but will not necessarily, have similar characteristics as the ADRs. For example, certain factors may increase or decrease the public float of the ADRs and, as a result, the ADRs may have less liquidity or lower market value than the underlying common shares.

Exchange rate movements may adversely impact the value of an Underlying Stock that is an ADR. If an Underlying Stock is an ADR, the market price of the Underlying Stock will generally track the U.S. dollar value of the market price of the underlying common shares. Therefore, if the value of the related foreign currency in which the underlying common shares are traded decreases relative to the U.S. dollar, the market price of the Underlying Stock may decrease while the market price of the underlying common shares remains stable or increases, or does not decrease to the same extent. As a result, changes in, and the volatility of, the exchange rates between the U.S. dollar and the relevant non-U.S. currency could have a negative impact on the value of the Underlying Stock and consequently, the value of your notes and the Redemption Amount.

Adverse trading conditions in the applicable non-U.S. market may negatively affect the value of an Underlying Stock that is an ADR. Holders of an Underlying Company's ADRs may usually surrender the ADRs in order to receive and trade the underlying common shares. This provision permits investors in the ADRs to take advantage of price differentials between markets. However, this provision may also cause the market prices of the applicable Underlying Stock to more closely correspond with the values of the common shares in the applicable non-U.S. markets. As a result, a market outside of the United States for the underlying common shares that is not liquid may also result in an illiquid market for the ADRs, which may negatively impact the value of such ADRs and, consequently, the value of your notes.

Delisting of an Underlying Stock that is an ADR may adversely affect the value of the notes.

If an Underlying Stock that is an ADR is no longer listed or admitted to trading on a U.S. securities exchange registered under the Exchange Act or included in the OTC Bulletin Board Service operated by the Financial Industry Regulatory Authority, Inc. ("**FINRA**"), or if the ADR facility between the Underlying Company and the ADR depositary is terminated for any reason, the Market Measure for the notes will be deemed to be the Underlying Company's common equity securities rather than the ADRs, and the calculation agent will determine the price of the Market Measure by reference to those common shares, as described below under "Description of the Notes—Delisting of ADRs or Termination of ADR Facility." Replacing the original ADRs with the underlying common shares may adversely affect the value of the notes and the Redemption Amount.

Other Risk Factors Relating to the Underlying Stock

The applicable term sheet may set forth additional risk factors as to the Underlying Stock that you should review prior to purchasing the notes.

USE OF PROCEEDS AND HEDGING

We will use the net proceeds we receive from each sale of the notes for the purposes described in the accompanying prospectus supplement under “Use of Proceeds.” In addition, we expect that we or our affiliates may use a portion of the net proceeds to hedge our obligations under the notes.

DESCRIPTION OF THE NOTES

General

Each issue of the notes will be part of a series of medium-term notes entitled “Senior Global Medium-Term Notes, Series G” that will be issued under the senior indenture, as amended and supplemented from time to time. The senior indenture is described more fully in the prospectus and prospectus supplement. The following description of the notes supplements and, to the extent it is inconsistent with, supersedes the description of the general terms and provisions of the notes and debt securities set forth under the headings “Description of the Notes We May Offer” in the prospectus supplement and “Description of Debt Securities” in the prospectus. These documents should be read in connection with the applicable term sheet.

The maturity date of the notes and the aggregate principal amount of each issue of notes will be stated in the term sheet. If any payment is due on a day that is not a business day, we will make the required payment on the next business day, and no additional interest will accrue as a result of such delay.

The notes do not guarantee the return of principal at maturity. The notes will be payable only in U.S. dollars.

Prior to the maturity date, the notes are not redeemable by us, except under the limited circumstances set forth below, or repayable at the option of any holder. The notes are not subject to any sinking fund. The notes are not subject to the defeasance provisions described in the prospectus under the caption “Description of Debt Securities—Defeasance.”

We will issue the notes in denominations of whole units. Unless otherwise set forth in the applicable term sheet, each unit will have a principal amount of \$10. The CUSIP number for each issue of the notes will be set forth in the applicable term sheet. You may transfer the notes only in whole units.

Interest

The notes will bear periodic interest payments at the fixed rate specified in the applicable term sheet. Unless otherwise set forth in the applicable term sheet, the interest will be paid quarterly in cash in arrears on each interest payment date specified in the term sheet. Interest payable on the notes will be computed on the basis of a 360-day year of twelve 30-day months.

Each interest payment will include interest accrued from, and including, the issue date or the most recent interest payment date to, but excluding, the next interest payment date. Unless otherwise specified in the term sheet, for so long as the notes are held in book-entry form only, we will pay interest to the persons in whose names the notes are registered at the close of business one business day prior to each interest payment date. If an interest payment date falls on a day that is not a business day, that interest payment will be made on the next succeeding business day and no additional interest will accrue as a result of the delayed payment.

Unless otherwise set forth in the term sheet, a “**business day**” means any day other than a day on which banking institutions in New York, New York are authorized or required by law, regulation, or executive order to close or a day on which transactions in U.S. dollars are not conducted.

Notwithstanding the foregoing, the final payment of interest and the Redemption Amount will be paid to the person in whose names the notes are registered on the maturity date.

Payment at Maturity

At maturity, subject to our credit risk as issuer of the notes, in addition to the final interest payment on the notes, you will receive a Redemption Amount, denominated in U.S. dollars. In no event will the Redemption Amount be less than zero. The “**Redemption Amount**” will be calculated as follows:

- If the Ending Value is greater than or equal to the Step Level, then the Redemption Amount will equal:

$$\text{Principal Amount} + \text{Step Payment}$$

- If the Ending Value is less than the Step Level but is greater than or equal to the Threshold Value, then the Redemption Amount will equal the principal amount.
- If the Ending Value is less than the Threshold Value, then the Redemption Amount will equal:

$$\text{Principal Amount} - \left[\text{Principal Amount} \times \left(\frac{\text{Threshold Value} - \text{Ending Value}}{\text{Starting Value}} \right) \right]$$

The “**Step Level**” will be a price of the Underlying Stock that reflects a specified percentage above the Starting Value. The Step Level will be determined on the pricing date and set forth in the term sheet.

The “**Step Payment**” will be a dollar amount representing a fixed percentage of the principal amount and set forth in the term sheet.

The “**Threshold Value**” will be a price of the Underlying Stock that equals a specified percentage of the Starting Value, which will be less than or equal to 100%. The Threshold Value will be determined on the pricing date and set forth in the term sheet. If the Threshold Value is equal to 100% of the Starting Value, then the Redemption Amount for the notes will be less than the principal amount if there is any decrease in the value of the Underlying Stock from the Starting Value to the Ending Value, and you may lose all of your investment in the notes.

Each term sheet will provide examples of payments on the notes based on a hypothetical Starting Value, Threshold Value, Step Level, Step Payment and hypothetical Ending Values.

The term sheet will set forth information as to the Underlying Stock, including information as to the historical prices of the Underlying Stock. However, historical prices of the Underlying Stock are not indicative of its future performance or the performance of your notes.

An investment in the notes does not entitle you to any ownership interest, including any voting rights, in the Underlying Stock, nor dividends paid or other distributions made, by the Underlying Company.

The Starting Value and the Ending Value

Starting Value

Unless otherwise specified in the term sheet, the “**Starting Value**” will be the price of the Underlying Stock on the pricing date, determined as set forth in the term sheet.

Ending Value

Unless otherwise specified in the term sheet, the “**Ending Value**” will equal the Closing Market Price of the Underlying Stock on the valuation date multiplied by the Price Multiplier.

Unless otherwise specified in the applicable term sheet, the following definitions will apply:

The “**valuation date**” means a trading day shortly before the maturity date. The valuation date will be set forth in the term sheet.

A “**trading day**” means a day on which trading is generally conducted (or was scheduled to have been generally conducted, but for the occurrence of a Market Disruption Event) on the New York Stock Exchange (the “**NYSE**”), the NASDAQ Stock Market, the Chicago Board Options Exchange, and in the over-the-counter market for equity securities in the United States, or any successor exchange or market, or in the case of a security traded on one or more non-U.S. securities exchanges or markets, on the principal non-U.S. securities exchange or market for such security .

If the valuation date is not a trading day or if there is a Market Disruption Event on that day, the valuation date will be the immediately succeeding trading day during which no Market Disruption Event occurs or is continuing; provided that the Closing Market Price of the Underlying Stock will be determined (or, if not determinable, estimated) by the calculation agent in a commercially reasonable manner on a date no later than the second scheduled trading day prior to the maturity date, regardless of the occurrence of a Market Disruption Event on that day.

The “**Closing Market Price**” for one share of the Underlying Stock (or one unit of any other security for which a Closing Market Price must be determined) on any trading day means any of the following (in each case subject to the prior paragraph):

- if the Underlying Stock (or such other security) is listed or admitted to trading on a national securities exchange, the last reported sale price, regular way (or, in the case of The NASDAQ Stock Market, the official closing price), of the principal trading session on that day on the principal U.S. securities exchange registered under the Exchange Act on which the Underlying Stock (or such other security) is listed or admitted to trading;
- if the Underlying Stock (or such other security) is not listed or admitted to trading on any national securities exchange but is included in the OTC Bulletin Board, the last reported sale price of the principal trading session on the OTC Bulletin Board on that day;
- if the Underlying Stock (or such other security) is issued by a foreign issuer and its closing price cannot be determined as set forth in the two bullet points above, and the Underlying Stock (or such other security) is listed or admitted to trading on a non-U.S.

securities exchange or market, the last reported sale price, regular way, of the principal trading session on that day on the primary non-U.S. securities exchange or market on which the Underlying Stock (or such other security) is listed or admitted to trading (converted to U.S. dollars using such exchange rate as the calculation agent, in its sole discretion, determines to be commercially reasonable); or

- if the Closing Market Price cannot be determined as set forth in the prior bullets, the mean, as determined by the calculation agent, of the bid prices for the Underlying Stock (or such other security) obtained from as many dealers in that security (which may include us, MLPF&S and/or any of our respective affiliates), but not exceeding three, as will make the bid prices available to the calculation agent. If no such bid price can be obtained, the Closing Market Price will be determined (or, if not determinable, estimated) by the calculation agent in its sole discretion in a commercially reasonable manner.

The initial “**Price Multiplier**” for the Underlying Stock will be one, unless otherwise set forth in the applicable term sheet. The Price Multiplier will be subject to adjustment for certain corporate events relating to the Underlying Stock described below under “—Anti-Dilution Adjustments.”

Market Disruption Events

As to any Underlying Stock, a “**Market Disruption Event**” means any of the following events, as determined by the calculation agent in its sole discretion:

- (A) the suspension of or material limitation of trading, in each case, for more than two consecutive hours of trading, or during the one-half hour period preceding the close of trading, of the shares of the Underlying Stock (or the successor to the Underlying Stock) on the primary exchange where such shares trade, as determined by the calculation agent (without taking into account any extended or after-hours trading session);
- (B) the suspension of or material limitation of trading, in each case, for more than two consecutive hours of trading, or during the one-half hour period preceding the close of trading, on the primary exchange that trades options contracts or futures contracts related to the shares of the Underlying Stock (or successor to the Underlying Stock) as determined by the calculation agent (without taking into account any extended or after-hours trading session), in options contracts or futures contracts related to the shares of the Underlying Stock; or
- (C) the determination that the scheduled valuation date is not a trading day by reason of an event, occurrence, declaration, or otherwise.

For the purpose of determining whether a Market Disruption Event has occurred:

- (1) a limitation on the hours in a trading day and/or number of days of trading will not constitute a Market Disruption Event if it results from an announced change in the regular business hours of the relevant exchange;
- (2) a decision to permanently discontinue trading in the shares of the Underlying Stock (or successor Underlying Stock) or the relevant futures or options contracts relating to such shares will not constitute a Market Disruption Event;
- (3) a suspension in trading in a futures or options contract on the shares of the Underlying Stock (or successor Underlying Stock), by a major securities market

by reason of (a) a price change violating limits set by that securities market, (b) an imbalance of orders relating to those contracts, or (c) a disparity in bid and ask quotes relating to those contracts, will each constitute a suspension of or material limitation on trading in futures or options contracts relating to the Underlying Stock;

- (4) subject to paragraph (3) above, a suspension of or material limitation on trading on the relevant exchange will not include any time when that exchange is closed for trading under ordinary circumstances; and
- (5) for the purpose of clause (A) above, any limitations on trading during significant market fluctuations under NYSE Rule 80B, or any applicable rule or regulation enacted or promulgated by the NYSE or any other self-regulatory organization or the SEC of similar scope as determined by the calculation agent, will be considered “material.”

Anti-Dilution Adjustments

As to any Underlying Stock, the calculation agent, in its sole discretion, may adjust the Price Multiplier (and as a result, the Ending Value), and any other terms of the notes (such as the Starting Value), if an event described below occurs after the pricing date and on or before the valuation date if the calculation agent determines that such an event has a diluting or concentrative effect on the theoretical value of the shares of the Underlying Stock or successor Underlying Stock.

The Price Multiplier resulting from any of the adjustments specified below will be rounded to the eighth decimal place with five one-billionths being rounded upward. No adjustments to the Price Multiplier will be required unless the adjustment would require a change of at least 0.1% in the Price Multiplier then in effect. Any adjustment that would require a change of less than 0.1% in the Price Multiplier which is not applied at the time of the event may be reflected at the time of any subsequent adjustment that would require a change of the Price Multiplier. The required adjustments specified below do not cover all events that could affect the Underlying Stock.

No adjustments to the Price Multiplier or any other terms of the notes will be required other than those specified below. However, the calculation agent may, at its sole discretion, make additional adjustments to the Price Multiplier or any other terms of the notes to reflect changes to the Underlying Stock if the calculation agent determines that the adjustment is appropriate to ensure an equitable result.

The calculation agent will be solely responsible for the determination of any adjustments to the Price Multiplier or any other terms of the notes and of any related determinations with respect to any distributions of stock, other securities or other property or assets, including cash, in connection with any corporate event described below; its determinations and calculations will be conclusive absent a determination of a manifest error.

No adjustments are required to be made for certain other events, such as offerings of common equity securities by the Underlying Company for cash or in connection with the occurrence of a partial tender or exchange offer for the Underlying Stock by the Underlying Company.

Following an event that results in an adjustment to the Price Multiplier or any of the other terms of the notes, the calculation agent may (but is not required to) provide holders of the notes with information about that adjustment as it deems appropriate, depending on the

nature of the adjustment. Upon written request by any holder of the notes, the calculation agent will provide that holder with information about such adjustment.

Anti-Dilution Adjustments to Underlying Stocks that Are Common Equity

The calculation agent, in its sole discretion and as it deems reasonable, may adjust the Price Multiplier and other terms of the notes, and hence the Ending Value, as a result of certain events related to the Underlying Stock, which include, but are not limited to, the following:

Stock Splits and Reverse Stock Splits. If the Underlying Stock is subject to a stock split or reverse stock split, then once such split has become effective, the Price Multiplier will be adjusted such that the new Price Multiplier will equal the product of:

- the prior Price Multiplier; and
- the number of shares that a holder of one share of the Underlying Stock before the effective date of the stock split or reverse stock split would have owned immediately following the applicable effective date.

For example, a two-for-one stock split would ordinarily change a Price Multiplier of one into a Price Multiplier of two. In contrast, a one-for-two reverse stock split would ordinarily change a Price Multiplier of one into a Price Multiplier of one-half.

Stock Dividends. If the Underlying Stock is subject to (i) a stock dividend (i.e., an issuance of additional shares of Underlying Stock) that is given ratably to all holders of the Underlying Stock or (ii) a distribution of additional shares of the Underlying Stock as a result of the triggering of any provision of the organizational documents of the Underlying Company, then, once the dividend has become effective and the Underlying Stock is trading ex-dividend, the Price Multiplier will be adjusted on the ex-dividend date such that the new Price Multiplier will equal the prior Price Multiplier *plus* the product of:

- the prior Price Multiplier; and
- the number of additional shares issued in the stock dividend with respect to one share of the Underlying Stock;

provided that no adjustment will be made for a stock dividend for which the number of shares of the Underlying Stock paid or distributed is based on a fixed cash equivalent value, unless such distribution is an Extraordinary Dividend (as defined below).

For example, a stock dividend of one new share for each share held would ordinarily change a Price Multiplier of one into a Price Multiplier of two.

Extraordinary Dividends. There will be no adjustments to the Price Multiplier to reflect any cash dividends or cash distributions paid with respect to the Underlying Stock other than Extraordinary Dividends, as described below, and distributions described under the section entitled “—Reorganization Events” below.

An “**Extraordinary Dividend**” means, with respect to a cash dividend or other distribution with respect to the Underlying Stock, a dividend or other distribution that the calculation agent determines, in its sole discretion, is not declared or otherwise made according to the Underlying Company’s then existing policy or practice of paying such dividends on a

quarterly or other regular basis. If an Extraordinary Dividend occurs, the Price Multiplier will be adjusted on the ex-dividend date so that the new Price Multiplier will equal the product of:

- the prior Price Multiplier; and
- a fraction, the numerator of which is the Closing Market Price per share of the Underlying Stock on the trading day preceding the ex-dividend date and the denominator of which is the amount by which the Closing Market Price per share of the Underlying Stock on that preceding trading day exceeds the Extraordinary Dividend Amount.

The “**Extraordinary Dividend Amount**” with respect to an Extraordinary Dividend will equal:

- in the case of cash dividends or other distributions that constitute regular dividends, the amount per share of the Underlying Stock of that Extraordinary Dividend minus the amount per share of the immediately preceding non-Extraordinary Dividend for that share; or
- in the case of cash dividends or other distributions that do not constitute regular dividends, the amount per share of the Underlying Stock of that Extraordinary Dividend.

To the extent an Extraordinary Dividend is not paid in cash, the value of the non-cash component will be determined by the calculation agent, whose determination will be conclusive. A distribution on the Underlying Stock described in the section “—Issuance of Transferable Rights or Warrants” or clause (a), (d) or (e) of the section entitled “—Reorganization Events” below that also constitutes an Extraordinary Dividend will only cause an adjustment under those respective sections.

Issuance of Transferable Rights or Warrants. If the Underlying Company issues transferable rights or warrants to all holders of record of the Underlying Stock to subscribe for or purchase the Underlying Stock, including new or existing rights to purchase the Underlying Stock under a shareholder rights plan or arrangement, then the Price Multiplier will be adjusted on the trading day immediately following the issuance of those transferable rights or warrants so that the new Price Multiplier will equal the prior Price Multiplier plus the product of:

- the prior Price Multiplier; and
- the number of shares of the Underlying Stock that can be purchased with the cash value of those warrants or rights distributed on one share of the Underlying Stock.

The number of shares that can be purchased will be based on the Closing Market Price of the Underlying Stock on the date the new Price Multiplier is determined. The cash value of those warrants or rights, if the warrants or rights are traded on a registered national securities exchange, will equal the closing price of that warrant or right. If the warrants or rights are not traded on a registered national securities exchange, the cash value will be determined by the calculation agent and will equal the average of the bid prices obtained from three dealers at 3:00 p.m., New York time on the date the new Price Multiplier is determined, provided that if only two of those bid prices are available, then the cash value of those warrants or rights will equal the average of those bids and if only one of those bids is available, then the cash value of those warrants or rights will equal that bid.

Reorganization Events

If after the pricing date and on or prior to the valuation date of the notes, as to any Underlying Stock:

- (a) there occurs any reclassification or change of the Underlying Stock, including, without limitation, as a result of the issuance of tracking stock by the Underlying Company;
- (b) the Underlying Company, or any surviving entity or subsequent surviving entity of the Underlying Company (a “**Successor Entity**”), has been subject to a merger, combination, or consolidation and is not the surviving entity;
- (c) any statutory exchange of securities of the Underlying Company or any Successor Entity with another corporation occurs, other than under clause (b) above;
- (d) the Underlying Company is liquidated or is subject to a proceeding under any applicable bankruptcy, insolvency, or other similar law;
- (e) the Underlying Company issues to all of its shareholders securities of an issuer other than the Underlying Company, including equity securities of an affiliate of the Underlying Company, other than in a transaction described in clauses (b), (c), or (d) above;
- (f) a tender or exchange offer or going-private transaction is consummated for all the outstanding shares of the Underlying Company;
- (g) there occurs any reclassification or change of the Underlying Stock that results in a transfer or an irrevocable commitment to transfer all such outstanding shares of the Underlying Stock to another entity or person;
- (h) the Underlying Company or any Successor Entity is the surviving entity of a merger, combination, or consolidation, that results in the outstanding Underlying Stock (other than Underlying Stock owned or controlled by the other party to such transaction) immediately prior to such event collectively representing less than 50% of the outstanding Underlying Stock immediately following such event; or
- (i) the Underlying Company ceases to file the financial and other information with the SEC in accordance with Section 13(a) of the Exchange Act (an event in clauses (a) through (i), a “**Reorganization Event**”),

then, on or after the date of the occurrence of a Reorganization Event, the calculation agent shall, in its sole discretion, make an adjustment to the Price Multiplier or to the method of determining the Redemption Amount or any other terms of the notes as the calculation agent, in its sole discretion, determines appropriate to account for the economic effect on the notes of that Reorganization Event (including adjustments to account for changes in volatility, expected dividends, stock loan rate, or liquidity relevant to the Underlying Stock or to the notes), which may, but need not, be determined by reference to the adjustment(s) made in respect of such Reorganization Event by an options exchange to options on the relevant Underlying Stock traded on that options exchange and determine the effective date of that adjustment. If the calculation agent determines that no adjustment that it could make will produce a commercially reasonable result, then the calculation agent may cause the maturity date of the notes to be accelerated to the fifth business day following the date of that determination and

the Redemption Amount payable to you will be calculated as though the date of early repayment were the stated maturity date of the notes and as though the valuation date were the fifth trading day prior to the date of acceleration.

If the Underlying Company ceases to file the financial and other information with the SEC in accordance with Section 13(a) of the Exchange Act, as contemplated by clause (i) above, and the calculation agent determines in its sole discretion that sufficiently similar information is not otherwise available to you, then the calculation agent may cause the maturity date of the notes to be accelerated to the fifth business day following the date of that determination and the Redemption Amount payable to you will be calculated as though the date of early repayment were the stated maturity date of the notes, and as though the valuation date were the fifth trading day prior to the date of acceleration. If the calculation agent determines that sufficiently similar information is available to you, the Reorganization Event will be deemed to have not occurred.

If the notes are accelerated as described in the two preceding paragraphs, you will also receive interest accrued on the notes until the date that the Redemption Amount is paid. However, upon any such acceleration, you will not be entitled to any interest that would have accrued after the date of acceleration.

Alternative Anti-Dilution and Reorganization Adjustments

The calculation agent may elect at its discretion to not make any of the adjustments to the Price Multiplier or to the other terms of the notes, including the method of determining the Redemption Amount, described in this section, but may instead make adjustments, in its discretion, to the Price Multiplier or any other terms of the notes (such as the Starting Value) that will reflect the adjustments to the extent practicable made by the Options Clearing Corporation on options contracts on the Underlying Stock or any successor common stock. For example, if the Underlying Stock is subject to a two-for-one stock split, and the Options Clearing Corporation adjusts the strike prices of the options contract on the Underlying Stock by dividing the strike price by two, then the calculation agent may also elect to divide the Starting Value by two. In this case, the Price Multiplier will remain one. This adjustment would have the same economic effect on holders of the notes as if the Price Multiplier had been adjusted.

Anti-Dilution Adjustments to Underlying Stocks that Are ADRs

For purposes of the anti-dilution adjustments set forth above, if the Underlying Stock is an ADR (an “**Underlying ADR**”), the calculation agent will consider the effect of any of the relevant events on the Underlying ADR, and adjustments will be made as if the Underlying ADR was the Underlying Stock described above. For example, if the stock represented by the Underlying ADR is subject to a two-for-one stock split, and assuming an initial Price Multiplier of 1, the Price Multiplier for the Underlying ADR would be adjusted so that it equals two. Unless otherwise specified in the applicable term sheet, with respect to notes linked to an Underlying ADR (or an Underlying Stock issued by a non-U.S. Underlying Company), the term “dividend” means the dividends paid to holders of the Underlying ADR (or the Underlying Stock issued by the non-U.S. Underlying Company), and such dividends may reflect the netting of any applicable foreign withholding or similar taxes that may be due on dividends paid to a U.S. person.

The calculation agent may determine not to make an adjustment if:

- (A) holders of the Underlying ADR are not eligible to participate in any of the events that would otherwise require anti-dilution adjustments as set forth above if the notes had been linked directly to the common shares of the Underlying Company represented by the Underlying ADR; or
- (B) to the extent that the calculation agent determines that the Underlying Company or the depositary for the ADRs has adjusted the number of common shares of the Underlying Company represented by each share of the Underlying ADR, so that the market price of the Underlying ADR would not be affected by the corporate event.

If the Underlying Company or the depositary for the ADRs, in the absence of any of the events described above, elects to adjust the number of common shares of the Underlying Company represented by each share of the Underlying ADR, then the calculation agent may make the appropriate anti-dilution adjustments to reflect such change. The depositary for the ADRs may also make adjustments in respect of the ADRs for share distributions, rights distributions, cash distributions and distributions other than shares, rights, and cash. Upon any such adjustment by the depositary, the calculation agent may adjust the Price Multiplier or other terms of the notes as the calculation agent determines commercially reasonable to account for that event.

Delisting of ADRs or Termination of ADR Facility

If the Underlying ADR is no longer listed or admitted to trading on a U.S. securities exchange registered under the Exchange Act or included in the OTC Bulletin Board Service operated by FINRA, or if the ADR facility between the Underlying Company and the ADR depositary is terminated for any reason, then, on and after the date that the Underlying ADR is no longer so listed or admitted to trading or the date of such termination, as applicable (the “**termination date**”), the Market Measure for the notes will be deemed to be the Underlying Company’s common equity securities rather than the Underlying ADR. The calculation agent will determine the price of the Market Measure by reference to those common shares. Under such circumstances, the calculation agent may modify any terms of the notes as it deems necessary, in its sole discretion, to ensure an equitable result. On and after the termination date, for all purposes, the Closing Market Price of the Underlying Company’s common shares on their primary exchange will be converted to U.S. dollars using such exchange rate as the calculation agent, in its sole discretion, determines to be commercially reasonable.

Underlying Stock

Any information regarding the Underlying Stock or the Underlying Company will be derived from publicly available documents. Any Underlying Stock will be registered under the Exchange Act. Information provided to or filed with the SEC by any Underlying Company can be located at the SEC’s facilities or through the SEC’s website, www.sec.gov. None of us, the agents, or any of our respective affiliates will have independently verified the accuracy or completeness of any of the information or reports of an Underlying Company.

The selection of the Underlying Stock is not a recommendation to buy or sell the Underlying Stock. Neither we nor any of our subsidiaries or affiliates makes any representation to any purchaser of the notes as to the performance of the Underlying Stock.

Role of the Calculation Agent

The calculation agent has the sole discretion to make all determinations regarding the notes as described in this product supplement, including determinations regarding the Starting Value, the Threshold Value, the Step Level, the Ending Value, the Price Multiplier, the Closing Market Price, the Redemption Amount, any Market Disruption Events, a successor Underlying Stock, business days, and trading days. Absent manifest error, all determinations of the calculation agent will be conclusive for all purposes and final and binding on you and us, without any liability on the part of the calculation agent.

We expect to appoint MLPF&S or one of its affiliates as the calculation agent for each issue of the notes. However, we may change the calculation agent at any time without notifying you. The identity of the calculation agent will be set forth in the applicable term sheet.

Payment of Additional Amounts

We will pay any amounts to be paid by us on the notes without deduction or withholding for, or on account of, any and all present or future income, stamp and other taxes, levies, imposts, duties, charges, fees, deductions, or withholdings (“**taxes**”) now or hereafter imposed, levied, collected, withheld, or assessed by or on behalf of Canada or any Canadian political subdivision or authority that has the power to tax, unless the deduction or withholding is required by law or by the interpretation or administration thereof by the relevant governmental authority. At any time a Canadian taxing jurisdiction requires us to deduct or withhold for or on account of taxes from any payment made under or in respect of the notes, we will pay such additional amounts (“**Additional Amounts**”) as may be necessary, so that the net amounts received by each holder (including Additional Amounts), after such deduction or withholding, shall not be less than the amount the holder would have received had no such deduction or withholding been required.

However, no Additional Amounts will be payable with respect to a payment made to a holder of a note or of a right to receive payments in respect thereto (a “**Payment Recipient**”), which we refer to as an “**Excluded Holder**,” in respect of a beneficial owner or Payment Recipient:

(i) with whom we do not deal at arm’s length (within the meaning of the Income Tax Act (Canada)) at the time of making such payment;

(ii) who is subject to such taxes by reason of the holder being connected presently or formerly with Canada or any province or territory thereof otherwise than by reason of the holder’s activity in connection with purchasing the notes, the holding of the notes or the receipt of payments thereunder;

(iii) who is, or who does not deal at arm’s length with a person who is, a “**specified shareholder**” (within the meaning of subsection 18(5) of the Income Tax Act (Canada)) of Royal Bank of Canada (generally a person will be a “specified shareholder” for this purpose if that person, either alone or together with persons with whom the person does not deal at arm’s length, owns 25% or more of (a) our voting shares, or (b) the fair market value of all of our issued and outstanding shares);

(iv) who presents such notes for payment (where presentation is required, such as if a note is issued in definitive form) more than 30 days after the relevant date; for this purpose, the “relevant date” in relation to any payments on any note means:

- (a) the due date for payment thereof (whether at maturity or upon an earlier acceleration), or
- (b) if the full amount of the monies payable on such date has not been received by the trustee on or prior to such due date, the date on which the full amount of such monies has been received and notice to that effect is given to holders of the notes in accordance with the senior indenture;

(v) who could lawfully avoid (but has not so avoided) such withholding or deduction by complying, or requiring that any third party comply with, any statutory requirements or by making, or requiring that any third party make, a declaration of non-residence or other similar claim for exemption to any relevant tax authority; or

(vi) who is subject to deduction or withholding on account of any tax, assessment, or other governmental charge that is imposed or withheld by reason of the application of Section 1471 through 1474 of the United States Internal Revenue Code of 1986 (the “**Code**”) (or any successor provisions), any regulation, pronouncement, or agreement thereunder, official interpretations thereof, or any law implementing an intergovernmental approach thereto, whether currently in effect or as published and amended from time to time.

For purposes of clause (iv) above, if a note is presented for payment more than 30 days after the relevant date, we shall only be required to pay such Additional Amounts as shall have accrued as of such 30th day, and no further Additional Amounts shall accrue or become payable after such date.

For the avoidance of doubt, we will not have any obligation to pay any holders Additional Amounts on any tax which is payable otherwise than by deduction or withholding from payments made under or in respect of the notes.

We will also make such withholding or deduction and remit the full amount deducted or withheld to the relevant authority in accordance with applicable law. We will furnish to the trustee, within 30 days after the date the payment of any taxes is due pursuant to applicable law, certified copies of tax receipts evidencing that such payment has been made or other evidence of such payment satisfactory to the trustee. We will indemnify and hold harmless each holder of the notes (other than an Excluded Holder) and upon written request reimburse each such holder for the amount of (x) any taxes so levied or imposed and paid by such holder as a result of payments made under or with respect to the notes and (y) any taxes levied or imposed and paid by such holder with respect to any reimbursement under (x) above, but excluding any such taxes on such holder’s net income or capital.

For additional information, see the section entitled “Tax Consequences—Canadian Taxation” in the accompanying prospectus.

Same-Day Settlement and Payment

The notes will be delivered in book-entry form only through The Depository Trust Company against payment by purchasers of the notes in immediately available funds. We will pay interest and the Redemption Amount in immediately available funds so long as the notes are maintained in book-entry form.

Events of Default and Acceleration

Events of default are defined in the senior indenture. If such an event occurs and is continuing, unless otherwise stated in the term sheet, the amount payable to a holder of the notes upon any acceleration permitted under the senior indenture will be equal to the Redemption Amount described under the caption “—Payment at Maturity,” determined as if the date of acceleration was the maturity date and as though the fifth trading day prior to the date of acceleration was the valuation date. If a bankruptcy proceeding is commenced in respect of us, your claim may be limited under applicable bankruptcy law. In case of a default in payment of the notes, whether at their maturity or upon acceleration, they will not bear a default interest rate.

For additional discussion of these matters, please see the discussion in the prospectus under the headings “Description of Debt Securities—Modification and Waiver of the Debt Securities” beginning on page 10 and “—Events of Default” beginning on page 15.

Listing

Unless otherwise specified in the applicable term sheet, the notes will not be listed on a securities exchange or quotation system.

SUPPLEMENTAL PLAN OF DISTRIBUTION

MLPF&S and one or more of its affiliates may act as our agents for any offering of the notes. The agents may act on either a principal basis or an agency basis, as set forth in the applicable term sheet. Each agent will be a party to a distribution agreement described in the “Supplemental Plan of Distribution” on page S-29 of the accompanying prospectus supplement.

Each agent will receive an underwriting discount that is a percentage of the aggregate principal amount of the notes sold through its efforts, which will be set forth in the applicable term sheet. You must have an account with the applicable agent in order to purchase the notes.

None of the agents is acting as your fiduciary or advisor solely as a result of the making of any offering of the notes, and you should not rely upon this product supplement, the term sheet, or the accompanying prospectus or prospectus supplement as investment advice or a recommendation to purchase any notes. You should make your own investment decision regarding the notes after consulting with your legal, tax, and other advisors.

MLPF&S and its affiliates may use this product supplement, the prospectus supplement, and the prospectus, together with the applicable term sheet, in market-making transactions for any notes after their initial sale solely for the purpose of providing investors with the description of the terms of the notes that were made available to investors in connection with the initial distribution of the notes. Secondary market investors should not, and will not be authorized to rely on these documents for information regarding Royal Bank of Canada or for any purpose other than that described in the immediately preceding sentence.

Selling Restrictions

European Economic Area

In relation to each Member State of the European Economic Area which has implemented the Prospectus Directive (each, a “**Relevant Member State**”), MLPF&S has represented and agreed that with effect from and including the date on which the Prospectus Directive is implemented in that Relevant Member State (the “**Relevant Implementation Date**”) it has not made and will not make an offer of the notes to the public in that Relevant Member State except that it may, with effect from and including the Relevant Implementation Date, make an offer of such notes to the public in that Relevant Member State:

- (a) if an offer of those notes may be made other than pursuant to Article 3(2) of the Prospectus Directive in that Relevant Member State (a “**Non-exempt Offer**”), following the date of publication of a prospectus in relation to such notes which has been approved by the competent authority in that Relevant Member State or, where appropriate, approved in another Relevant Member State and notified to the competent authority in that Relevant Member State, provided that any such prospectus has subsequently been completed by the final offering document contemplating such Non-exempt Offer, in accordance with the Prospectus Directive, in the period beginning and ending on the dates specified in such prospectus or final offering document, as applicable, and the issuer has consented in writing to its use for the purpose of that Non-exempt Offer;
- (b) at any time to any legal entity which is a qualified investor as defined in the Prospectus Directive;

- (c) at any time to fewer than 100 or, if the Relevant Member State has implemented the relevant provision of the 2010 PD Amending Directive (as defined below), 150, natural or legal persons (other than qualified investors as defined in the Prospectus Directive), subject to obtaining the prior consent of the relevant dealer or dealers nominated by the issuer for any such offer; or
- (d) at any time in any other circumstances falling within Article 3(2) of the Prospectus Directive,
 - (i) provided that no such offer of the notes referred to in (b) to (d) above shall require the issuer or any dealer to publish a prospectus pursuant to Article 3 of the Prospectus Directive or supplement a prospectus pursuant to Article 16 of the Prospectus Directive.

For the purposes of this provision, the expression an “offer of the notes to the public”, in relation to any notes in any Relevant Member State, means the communication in any form and by any means of sufficient information on the terms of the offer and the notes to be offered so as to enable an investor to decide to purchase or subscribe for the notes, as the same may be varied in that Member State by any measure implementing the Prospectus Directive in that Member State, the expression “Prospectus Directive” means Directive 2003/71/EC (and amendments thereto, including the 2010 PD Amending Directive, to the extent implemented in the Relevant Member State), and includes any relevant implementing measure in the Relevant Member State, and the expression “2010 PD Amending Directive” means Directive 2010/73/EU.

United Kingdom

MLPF&S has represented and agreed that:

- (a) in relation to any notes which have a maturity of less than one year, (i) it is a person whose ordinary activities involve it in acquiring, holding, managing, or disposing of investments (as principal or as agent) for the purposes of its business and (ii) it has not offered or sold and will not offer or sell any notes other than to persons whose ordinary activities involve them in acquiring, holding, managing, or disposing of investments (as principal or as agent) for the purposes of their businesses or who it is reasonable to expect will acquire, hold, manage, or dispose of investments (as principal or as agent) for the purposes of their businesses where the issue of the notes would otherwise constitute a contravention of section 19 of the Financial Services and Markets Act 2000 (the “**FSMA**”) by the issuer;
- (b) it has only communicated or caused to be communicated and will only communicate or cause to be communicated an invitation or inducement to engage in investment activity (within the meaning of section 21 of the FSMA) received by it in connection with the issue or sale of any notes in circumstances in which section 21(1) of the FSMA does not apply to the issuer; and
- (c) it has complied and will comply with all applicable provisions of the FSMA with respect to anything done by it in relation to the notes in, from or otherwise involving the United Kingdom.

Argentina

The notes are not and will not be marketed in Argentina by means of a public offer of securities, as such term is defined under Sections 2 and 83 of the Argentine Capital Markets Law No. 26,831, as securities. No application has been or will be made with the Argentine Comisión Nacional de Valores, the Argentine securities governmental authority, to offer the notes in Argentina.

Brazil

The information contained in this product supplement and in the accompanying prospectus supplement and prospectus does not constitute a public offering or distribution of securities in Brazil and no registration or filing with respect to any securities or financial products described in these documents has been made with the Comissão de Valores Mobiliários (the “**CVM**”). No public offer of securities or financial products described in this product supplement or in the accompanying prospectus supplement and prospectus should be made in Brazil without the applicable registration at the CVM.

The People’s Republic of China

These offering documents have not been filed with or approved by the People’s Republic of China (for such purposes, not including Hong Kong and Macau Special Administrative Regions or Taiwan) authorities, and is not an offer of securities (whether public offering or private placement) within the meaning of the Securities Law or other pertinent laws and regulations of the People’s Republic of China. These offering documents shall not be offered to the general public if used within the People’s Republic of China, and the notes so offered cannot be sold to anyone that is not a qualified purchaser of the People’s Republic of China. MLPF&S has represented, warranted and agreed that the notes are not being offered or sold and may not be offered or sold, directly or indirectly, in the People’s Republic of China, except under circumstances that will result in compliance with applicable laws and regulations.

France

The offering documents have not been approved by the Autorité des marchés financiers (“**AMF**”).

Offers of the notes (a) have only been made and will only be made to the public (offre au public) in France or an admission of the notes to trading on a regulated market in France in the period beginning (i) when a prospectus in relation to those notes has been approved by the AMF, on the date of such publication or, (ii) when a prospectus in relation to those notes has been approved by the competent authority of another Member State of the European Economic Area which has implemented the EU Prospectus Directive 2003/71/EC, on the date of notification of such approval to the AMF and, in either case, when the formalities required by French laws and regulations have been carried out, and ending at the latest on the date which is 12 months after the date of the approval of the prospectus, all in accordance with articles L.412-1 and L.621-8 to L.621-8-3 of the French Code monétaire et financier and the Règlement général of the AMF, or (b) have only been made and will only be made to the public in France or an admission of the notes to trading on a regulated market in France in circumstances which do not require the publication by the offeror of a prospectus pursuant to the French Code monétaire et financier and the Règlement général of the Autorité des marchés financiers.

The notes have not been offered or sold and will not be offered or sold, directly or indirectly, to the public in France, and have not been distributed or caused to be distributed

and the offering documents, or any other offering material relating to the notes, will not be distributed or caused to be distributed to the public in France, and such offers, sales and distributions have been and will be made in France only to (i) providers of the investment service of portfolio management for the account of third parties, and/or (ii) qualified investors (investisseurs qualifiés) other than individuals, acting for their own account, all as defined in, and in accordance with, articles L.411-2, D.411-1 to D.411-3, D.744-1, D.754-1 and D.764-1 of the French Code monétaire et financier. The direct or indirect resale of the notes to the public in France may be made only as provided by, and in accordance with, articles L.411-1, L.411-2, L.412-1 and L.621-8 to L.621-8-3 of the French Code monétaire et financier.

In addition, the notes, the offering documents and any other offering material relating to the notes, have not been and will not be distributed or caused to be distributed in the Republic of France, other than to investors to whom offers and sales of notes in the Republic of France may be made as described above.

Italy

No offers of the notes may be made to residents of the Republic of Italy.

Mexico

The notes have not been and will not be registered in the National Securities Registry (Registro Nacional de Valores). Therefore, the notes may not be offered or sold in the United Mexican States ("**Mexico**") by any means except in circumstances which constitute a private offering (oferta privada) pursuant to Article 8 of the Securities Market Law (Ley del Mercado de Valores) and its regulations. All applicable provisions of the Securities Market Law must be complied with in respect to anything done in relation to the notes in, from or otherwise involving Mexico.

Netherlands

No offers of the notes may be made to residents of the Netherlands.

New Zealand

No offeree of the notes shall directly or indirectly offer, sell or deliver any notes, or distribute the offering documents or any advertisement in relation to any offer of the notes, in New Zealand other than to persons whose principal business is the investment of money or who, in the course of and for the purposes of their business, habitually invest money, or who are each required to pay a minimum subscription price of at least NZ\$500,000 for the notes (excluding any amounts lent by the issuer or any of its affiliates) before the allotment of those notes, or who in all the circumstances can properly be regarded as having been selected otherwise than as members of the public, or in other circumstances where there is no contravention of the Securities Act 1978 of New Zealand.

Philippines

THE SECURITIES BEING OFFERED OR SOLD HAVE NOT BEEN REGISTERED WITH THE PHILIPPINES SECURITIES AND EXCHANGE COMMISSION UNDER THE SECURITIES REGULATION CODE. ANY FUTURE OFFER OR SALE THEREOF IS SUBJECT TO REGISTRATION REQUIREMENTS UNDER THE CODE UNLESS SUCH OFFER OR SALE QUALIFIES AS AN EXEMPT TRANSACTION.

Switzerland

The notes may not be offered, sold or advertised directly or indirectly into or in Switzerland except in a manner which will not result in a public offering within the meaning of article 652a or 1156 of the Swiss Federal Code of Obligations (“CO”). Neither this product supplement or the accompanying prospectus supplement and prospectus nor any other offering or marketing materials relating to the notes have been prepared with regard to the disclosure standards for prospectuses under article 652a or 1156 CO, and therefore do not constitute a prospectus within the meaning of article 652a or 1156 CO. Neither this prospectus supplement and the accompanying prospectus nor any other offering or marketing materials relating to the notes may be distributed, published or otherwise made available in Switzerland except in a manner which will not constitute a public offering of the notes into or in Switzerland.

Taiwan

The notes may be made available for purchase outside Taiwan by investors residing in Taiwan (either directly or through properly licensed Taiwan intermediaries acting on behalf of such investors) but may not be offered or sold in Taiwan.

Uruguay

The notes have not been registered under the Uruguayan Securities Market Law or recorded in the Uruguayan Central Bank. The notes are not available publicly in Uruguay and are offered only on a private basis. No action may be taken in Uruguay that would render any offering of the notes a public offering in Uruguay. No Uruguayan regulatory authority has approved the notes or passed on our solvency. In addition, any resale of the notes must be made in a manner that will not constitute a public offering in Uruguay.

Los valores no han sido registrados bajo la Ley de Mercado de Valores de la República Oriental del Uruguay o registrados ante el Banco Central del Uruguay. Los valores no son ofrecidos en forma pública en Uruguay y lo son únicamente en forma privada. Ninguna acción puede ser adoptada en Uruguay en relación a estos valores que resulte en que esta oferta de valores sea una oferta pública de valores en Uruguay. Ninguna autoridad regulatoria del Uruguay ha aprobado estos valores o se ha manifestado sobre nuestra solvencia. Adicionalmente, cualquier reventa de estos valores debe ser realizada en forma tal que no constituya oferta pública de valores en el Uruguay.

CANADIAN FEDERAL INCOME TAX SUMMARY

An investor should read carefully the description of material Canadian federal income tax considerations relevant to a Non-resident Holder owning debt securities under “Tax Consequences—Canadian Taxation” in the accompanying prospectus.

U.S. FEDERAL INCOME TAX SUMMARY

The following summary of the material U.S. federal income tax considerations of the acquisition, ownership, and disposition of the notes supplements, and to the extent inconsistent supersedes, the discussions under “Tax Consequences—United States Taxation” in the accompanying prospectus and under “Certain Income Tax Consequences—United States Taxation” in the accompanying prospectus supplement and is not exhaustive of all possible tax considerations. This summary is based upon the Code, regulations promulgated under the Code by the U.S. Treasury Department (“**Treasury**”) (including proposed and temporary regulations), rulings, current administrative interpretations and official pronouncements of the IRS, and judicial decisions, all as currently in effect and all of which are subject to differing interpretations or to change, possibly with retroactive effect. No assurance can be given that the IRS would not assert, or that a court would not sustain, a position contrary to any of the tax consequences described below. This summary does not include any description of the tax laws of any state or local governments, or of any foreign government, that may be applicable to a particular holder. If the tax consequences associated with the notes are different than those described below, they will be described in the applicable term sheet.

This summary is directed solely to U.S. holders and non-U.S. holders that, except as otherwise specifically noted, will purchase the notes upon original issuance and will hold the notes as capital assets within the meaning of Section 1221 of the Code, which generally means property held for investment, and that are not excluded from the discussion under “Tax Consequences—United States Taxation” in the accompanying prospectus.

You should consult your own tax advisor concerning the U.S. federal income tax consequences to you of acquiring, owning, and disposing of the notes, as well as any tax consequences arising under the laws of any state, local, foreign, or other tax jurisdiction and the possible effects of changes in U.S. federal or other tax laws.

General

Although there is no statutory, judicial, or administrative authority directly addressing the characterization of the notes, in the opinion of our counsel, Morrison & Foerster LLP, it would be reasonable to treat the notes with terms described in this product supplement as income-bearing pre-paid cash settled derivative contracts with respect to the Underlying Stock and under the terms of the notes, we and every investor in the notes agree, in the absence of an administrative determination or judicial ruling to the contrary, to treat the notes for all tax purposes in accordance with such characterization. This discussion assumes that the notes constitute income-bearing pre-paid cash settled derivative contracts with respect to the Underlying Stock for U.S. federal income tax purposes. If the notes did not constitute income-bearing pre-paid cash settled derivative contracts, the tax consequences described below would be materially different.

This characterization of the notes is not binding on the IRS or the courts. No statutory, judicial, or administrative authority directly addresses the characterization of the notes or any similar instruments for U.S. federal income tax purposes, and no ruling is being requested from the IRS with respect to their proper characterization and treatment. Due to the absence of

authorities on point, significant aspects of the U.S. federal income tax consequences of an investment in the notes are not certain, and no assurance can be given that the IRS or any court will agree with the characterization and tax treatment described in this product supplement. Accordingly, you are urged to consult your tax advisor regarding all aspects of the U.S. federal income tax consequences of an investment in the notes, including possible alternative characterizations.

Unless otherwise stated, the following discussion is based on the characterization described above. The discussion in this section assumes that there is a significant possibility of a significant loss of principal on an investment in the notes.

We will not attempt to ascertain whether the issuer of any Underlying Stock would be treated as a “passive foreign investment company” (“**PFIC**”), within the meaning of Section 1297 of the Code, or a United States real property holding corporation, within the meaning of Section 897(c) of the Code. If the issuer of any Underlying Stock were so treated, certain adverse U.S. federal income tax consequences could possibly apply to a holder of the notes. You should refer to information filed with the SEC by the issuer of any Underlying Stock and consult your tax advisor regarding the possible consequences to you, if any, if the issuer of any Underlying Stock is or becomes a PFIC or is or becomes a United States real property holding corporation.

U.S. Holders

Although the U.S. federal income tax treatment of the stated periodic interest payments on the notes is uncertain, we intend to take the position, and the following discussion assumes, that the stated periodic interest payments constitute taxable ordinary income to a U.S. holder at the time received or accrued in accordance with the U.S. holder’s regular method of accounting. By purchasing the notes you agree, in the absence of an administrative determination or judicial ruling to the contrary, to treat the stated periodic interest payments as described in the preceding sentence.

Upon receipt of a cash payment at maturity or upon a sale or exchange of the notes prior to maturity, a U.S. holder generally will recognize capital gain or loss equal to the difference between the amount realized (other than amounts representing accrued stated periodic interest payments, which would be taxed as described in the preceding paragraph) and the U.S. holder’s tax basis in the notes. A U.S. holder’s tax basis in the notes will equal the amount paid by that holder to acquire them. This capital gain or loss generally will be long-term capital gain or loss if the U.S. holder held the notes for more than one year. The deductibility of capital losses is subject to limitations.

Alternative Tax Treatments. Due to the absence of authorities that directly address the proper tax treatment of the notes, prospective investors are urged to consult their tax advisors regarding all possible alternative tax treatments of an investment in the notes. In particular, if the notes have a term that exceeds one year, the IRS could seek to subject the notes to the Treasury regulations governing contingent payment debt instruments. If the IRS were successful in that regard, the timing and character of income on the notes would be affected significantly. Among other things, a U.S. holder would be required to accrue original issue discount every year at a “comparable yield” determined at the time of issuance. In addition, any gain realized by a U.S. holder at maturity, or upon a sale or exchange, of the notes generally would be treated as ordinary income, and any loss realized at maturity would be treated as ordinary loss to the extent of the U.S. holder’s prior accruals of original issue discount, and as capital loss thereafter. If the notes have a term of one year or less, the notes would generally be subject to the rules concerning short-term debt instruments as described

under the heading “Tax Consequences—United States Taxation—Original Issue Discount—Short-Term Debt Securities” in the accompanying prospectus.

In addition, it is possible that the notes could be treated as a unit consisting of a deposit and a put option written by the note holder or as a notional principal contract, in which case the timing and character of income on the notes would be affected significantly.

The IRS released Notice 2008-2 (“**Notice**”), which sought comments from the public on the taxation of financial instruments currently taxed as “prepaid forward contracts.” This Notice addresses instruments such as the notes. According to the Notice, the IRS and Treasury are considering whether a holder of instruments such as the notes should be required to accrue ordinary income on a current basis, regardless of whether any payments are made prior to maturity. It is not possible to determine what guidance the IRS and Treasury will ultimately issue, if any. Any such future guidance may affect the amount, timing and character of income, gain, or loss in respect of the notes, possibly with retroactive effect.

The IRS and Treasury are also considering additional issues, including whether additional gain or loss from such instruments should be treated as ordinary or capital, whether foreign holders of such instruments should be subject to withholding tax on any deemed income accruals, whether Section 1260 of the Code, concerning certain “constructive ownership transactions,” generally applies or should generally apply to such instruments, and whether any of these determinations depend on the nature of the underlying asset.

In addition, proposed Treasury regulations require the accrual of income on a current basis for contingent payments made under certain notional principal contracts. The preamble to the regulations states that the “wait and see” method of accounting does not properly reflect the economic accrual of income on those contracts, and requires current accrual of income for some contracts already in existence. While the proposed regulations do not apply to prepaid forward contracts, the preamble to the proposed regulations expresses the view that similar timing issues exist in the case of prepaid forward contracts. If the IRS or Treasury publishes future guidance requiring current economic accrual for contingent payments on prepaid forward contracts, it is possible that you could be required to accrue income over the term of the notes.

Because of the absence of authority regarding the appropriate tax characterization of the notes, it is also possible that the IRS could seek to characterize the notes in a manner that results in tax consequences that are different from those described above. For example, the IRS could possibly assert that any gain or loss that a holder may recognize at maturity or upon the sale or exchange of the notes should be treated as ordinary gain or loss.

Non-U.S. Holders

The following discussion applies to non-U.S. holders of the notes. A non-U.S. holder is a beneficial owner of the notes that, for U.S. federal income tax purposes, is a non-resident alien individual, a foreign corporation, or a foreign estate or trust.

Because the U.S. federal income tax treatment of the notes (including the periodic stated interest payments) is uncertain, we will withhold U.S. federal income tax at a 30% rate (or at a lower rate under an applicable income tax treaty) on the entire amount of stated periodic interest payments made unless such payments are effectively connected with the conduct by the non-U.S. holder of a trade or business in the U.S. (in which case, to avoid withholding, the non-U.S. holder will be required to provide a Form W-8ECI). We will not pay any additional amounts in respect of such withholding. To claim benefits under an income tax

treaty, a non-U.S. holder must obtain a taxpayer identification number and certify as to its eligibility under the appropriate treaty's limitations on benefits article, if applicable. In addition, special rules may apply to claims for treaty benefits made by non-U.S. holders that are entities rather than individuals. The availability of a lower rate of withholding under an applicable income tax treaty will depend on whether such rate applies to the characterization of the payments under U.S. federal income tax laws. A non-U.S. holder that is eligible for a reduced rate of U.S. federal withholding tax pursuant to an income tax treaty may obtain a refund of any excess amounts withheld by filing an appropriate claim for refund with the IRS.

Except as otherwise discussed below, a non-U.S. holder generally will not be subject to U.S. federal income or withholding tax on any gain (not including for the avoidance of doubt any amounts representing accrued stated periodic interest payments which would be subject to the rules discussed in the previous paragraph) from the sale or exchange of the notes or their settlement at maturity, provided that the non-U.S. holder complies with applicable certification requirements and that the payment is not effectively connected with the conduct by the non-U.S. holder of a U.S. trade or business. Notwithstanding the foregoing, gain from the sale or exchange of the notes or their settlement at maturity may be subject to U.S. federal income tax if that non-U.S. holder is a non-resident alien individual and is present in the U.S. for 183 days or more during the taxable year of the settlement at maturity, sale or exchange and certain other conditions are satisfied.

If a non-U.S. holder of the notes is engaged in the conduct of a trade or business within the U.S. and if periodic stated interest payments and gain realized on the settlement at maturity, sale or exchange of the notes, is effectively connected with the conduct of such trade or business (and, if certain tax treaties apply, is attributable to a permanent establishment maintained by the non-U.S. holder in the U.S.), the non-U.S. holder generally will be subject to U.S. federal income tax on such periodic stated interest payments and gain on a net income basis in the same manner as if it were a U.S. holder. Such non-U.S. holders should read the material under the heading "—U.S. Holders," for a description of the U.S. federal income tax consequences of acquiring, owning, and disposing of the notes. In addition, if such non-U.S. holder is a foreign corporation, it may also be subject to a branch profits tax equal to 30% (or such lower rate provided by any applicable tax treaty) of a portion of its earnings and profits for the taxable year that are effectively connected with its conduct of a trade or business in the U.S., subject to certain adjustments.

A "**dividend equivalent**" payment is treated as a dividend from sources within the U.S. and such payments generally would be subject to a 30% (or a lower rate under an applicable treaty) U.S. withholding tax if paid to a non-U.S. holder. Under Treasury regulations, payments (including deemed payments) that are contingent upon or determined by reference to actual or estimated U.S. source dividends, with respect to certain equity-linked instruments, whether explicitly stated or implicitly taken into account in computing one or more of the terms of such instruments, may be treated as dividend equivalents. However, this withholding on "dividend equivalent" payments, if any, will not apply to equity-linked instruments issued before January 1, 2017. If any payments are treated as dividend equivalents subject to withholding, we (or the applicable paying agent) would be entitled to withhold taxes in addition to the withholding tax described above without being required to pay any additional amounts with respect to amounts so withheld. Further, non-U.S. holders may be required to provide certifications prior to, or upon the settlement at maturity, sale or exchange of the notes in order to minimize or avoid U.S. withholding taxes.

As discussed above, alternative characterizations of the notes for U.S. federal income tax purposes are possible. Should an alternative characterization, by reason of change or clarification of the law, by regulation or otherwise, cause payments as to the notes to become

subject to withholding tax in addition to the withholding tax described above, tax will be withheld at the applicable statutory rate. Prospective non-U.S. holders of the notes should consult their own tax advisors in this regard.

U.S. Federal Estate Tax. Under current law, while the matter is not entirely clear, individual non-U.S. holders, and entities whose property is potentially includible in those individuals' gross estates for U.S. federal estate tax purposes (for example, a trust funded by such an individual and with respect to which the individual has retained certain interests or powers), should note that, absent an applicable treaty benefit, the notes may be treated as U.S. situs property, subject to U.S. federal estate tax. These individuals and entities should consult their own tax advisors regarding the U.S. federal estate tax consequences of investing in the notes.

Backup Withholding and Information Reporting

Payments made with respect to the notes and proceeds from the sale of the notes may be subject to a backup withholding tax unless, in general, the holder complies with certain procedures or is an exempt recipient. Any amounts so withheld generally will be refunded by the IRS or allowed as a credit against the holder's U.S. federal income tax, provided the holder makes a timely filing of an appropriate tax return or refund claim.

Reports will be made to the IRS and to holders that are not exempted from the reporting requirements.

Foreign Account Tax Compliance Act

The Foreign Account Tax Compliance Act ("**FATCA**") imposes a 30% U.S. withholding tax on certain U.S. source payments, including interest (and OID), 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 ("**Withholdable Payments**"), if paid to a foreign financial institution (including amounts paid to a foreign financial institution on behalf of a holder), unless such institution enters into an agreement with Treasury to collect and provide to Treasury certain information regarding U.S. financial account holders, including certain account holders that are foreign entities with U.S. owners, with such institution or otherwise complies with FATCA. In addition, the notes may constitute a "financial account" for these purposes and thus, be subject to information reporting requirements pursuant to FATCA. FATCA also generally imposes a withholding tax of 30% on Withholdable Payments made to a non-financial foreign entity unless such entity provides the withholding agent with a certification that it does not have any substantial U.S. owners or a certification identifying the direct and indirect substantial U.S. owners of the entity. Under certain circumstances, a holder may be eligible for refunds or credits of such taxes.

The U.S. Treasury Department and the IRS have announced that withholding on payments of gross proceeds from a sale or redemption of the notes will only apply to payments made after December 31, 2018. If we determine withholding is appropriate with respect to the notes, we will withhold tax at the applicable statutory rate, and we will not pay any additional amounts in respect of such withholding. Foreign financial institutions and non-financial foreign entities located in jurisdictions that have an intergovernmental agreement with the United States governing FATCA may be subject to different rules. Prospective investors are urged to consult with their own tax advisors regarding the possible implications of FATCA on their investment in the notes.

ERISA CONSIDERATIONS

Each fiduciary of a pension, profit-sharing, or other employee benefit plan subject to the Employee Retirement Income Security Act of 1974 (“**ERISA**”) (a “**Plan**”), should consider the fiduciary standards of ERISA in the context of the Plan’s particular circumstances before authorizing an investment in the notes. Accordingly, among other factors, the fiduciary should consider whether the investment would satisfy the prudence and diversification requirements of ERISA and would be consistent with the documents and instruments governing the Plan.

In addition, we, the agents, and certain of our respective subsidiaries and affiliates may be each considered a party in interest within the meaning of ERISA, or a disqualified person (within the meaning of the Code), with respect to many Plans, as well as many individual retirement accounts and Keogh plans (also “**Plans**”). Prohibited transactions within the meaning of ERISA or the Code would likely arise, for example, if the notes are acquired by or with the assets of a Plan with respect to which we or any of our affiliates is a party in interest, unless the notes are acquired under an exemption from the prohibited transaction rules. A violation of these prohibited transaction rules could result in an excise tax or other liabilities under ERISA and/or Section 4975 of the Code for such persons, unless exemptive relief is available under an applicable statutory or administrative exemption.

Under ERISA and various prohibited transaction class exemptions (“**PTCEs**”) issued by the U.S. Department of Labor, exemptive relief may be available for direct or indirect prohibited transactions resulting from the purchase, holding, or disposition of the notes. Those exemptions are PTCE 96-23 (for certain transactions determined by in-house asset managers), PTCE 95-60 (for certain transactions involving insurance company general accounts), PTCE 91-38 (for certain transactions involving bank collective investment funds), PTCE 90-1 (for certain transactions involving insurance company separate accounts), PTCE 84-14 (for certain transactions determined by independent qualified asset managers), and the exemption under Section 408(b)(17) of ERISA and Section 4975(d)(20) of the Code for certain arm’s-length transactions with a person that is a party in interest solely by reason of providing services to Plans or being an affiliate of such a service provider (the “**Service Provider Exemption**”).

Because we may be considered a party in interest with respect to many Plans, the notes may not be purchased, held, or disposed of by any Plan, any entity whose underlying assets include plan assets by reason of any Plan’s investment in the entity (a “**Plan Asset Entity**”) or any person investing plan assets of any Plan, unless such purchase, holding, or disposition is eligible for exemptive relief, including relief available under PTCE 96-23, 95-60, 91-38, 90-1, or 84-14 or the Service Provider Exemption, or such purchase, holding, or disposition is otherwise not prohibited. Any purchaser, including any fiduciary purchasing on behalf of a Plan, transferee or holder of the notes will be deemed to have represented, in its corporate and its fiduciary capacity, by its purchase and holding of the notes that either (a) it is not a Plan or a Plan Asset Entity and is not purchasing such notes on behalf of or with plan assets of any Plan or any plan subject to similar laws or (b) its purchase, holding, and disposition are eligible for exemptive relief or such purchase, holding, and disposition are not prohibited by ERISA or Section 4975 of the Code or similar laws.

Further, any person acquiring or holding the notes on behalf of any plan or with any plan assets shall be deemed to represent on behalf of itself and such plan that (x) the plan is paying no more than, and is receiving no less than, adequate consideration within the meaning of Section 408(b)(17) of ERISA in connection with the transaction or any redemption of the notes, (y) none of us, MLPF&S, or any other agent directly or indirectly exercises any discretionary authority or control or renders investment advice or otherwise acts in a fiduciary capacity with respect to the assets of the plan within the meaning of ERISA and (z) in making

the foregoing representations and warranties, such person has applied sound business principles in determining whether fair market value will be paid, and has made such determination acting in good faith.

The fiduciary investment considerations summarized above generally apply to employee benefit plans maintained by private-sector employers and to individual retirement accounts and other arrangements subject to Section 4975 of the Code, but generally do not apply to governmental plans (as defined in Section 3(32) of ERISA), certain church plans (as defined in Section 3(33) of ERISA), and foreign plans (as described in Section 4(b)(4) of ERISA). However, these other plans may be subject to similar provisions under applicable federal, state, local, foreign, or other regulations, rules, or laws ("**similar laws**"). The fiduciaries of plans subject to similar laws should also consider the foregoing issues in general terms as well as any further issues arising under the applicable similar laws.

In addition, any purchaser, that is a Plan or a Plan Asset Entity or that is acquiring the notes on behalf of a Plan or a Plan Asset Entity, including any fiduciary purchasing on behalf of a Plan or Plan Asset entity, will be deemed to have represented, in its corporate and its fiduciary capacity, by its purchase and holding of the notes that (a) none of us, MLPF&S, or any of our respective affiliates is a "**fiduciary**" (under Section 3(21) of ERISA, or under any final or proposed regulations thereunder, or with respect to a governmental, church, or foreign plan under any similar laws) with respect to the acquisition, holding or disposition of the notes, or as a result of any exercise by us or our affiliates of any rights in connection with the notes, (b) no advice provided by us or any of our affiliates has formed a primary basis for any investment decision by or on behalf of such purchaser in connection with the notes and the transactions contemplated with respect to the notes, and (c) such purchaser recognizes and agrees that any communication from us or any of our affiliates to the purchaser with respect to the notes is not intended by us or any of our affiliates to be impartial investment advice and is rendered in its capacity as a seller of such notes and not a fiduciary to such purchaser. Purchasers of the notes have exclusive responsibility for ensuring that their purchase, holding, and disposition of the notes do not violate the prohibited transaction rules of ERISA or the Code or any similar regulations applicable to governmental or church plans, as described above.

This discussion is a general summary of some of the rules which apply to benefit plans and their related investment vehicles. This summary does not include all of the investment considerations relevant to Plans and other benefit plan investors such as governmental, church, and foreign plans and should not be construed as legal advice or a legal opinion. Due to the complexity of these rules and the penalties that may be imposed upon persons involved in non-exempt prohibited transactions, it is particularly important that fiduciaries or other persons considering purchasing the notes on behalf of or with "**plan assets**" of any Plan or other benefit plan investor consult with their legal counsel prior to directing any such purchase.

Prospectus Supplement to Prospectus Dated January 8, 2016



Royal Bank of Canada
US\$ 40,000,000,000
Senior Global Medium-Term Notes, Series G
Terms of Sale

Royal Bank of Canada may from time to time offer and sell notes, which we refer to as the “notes” in this prospectus supplement, with various terms, including the following:

- stated maturity of 9 months or longer, except that indexed notes may have maturities of less than nine months
- fixed or floating interest rate, zero-coupon or issued with original issue discount; a floating interest rate may be based on:
 - commercial paper rate
 - U.S. prime rate
 - LIBOR
 - EURIBOR
 - Treasury rate
 - CMT rate
 - CMS rate
 - federal funds rate
- ranked as senior indebtedness of Royal Bank of Canada
- amount of principal and/or interest may be determined by reference to an index or formula
- book-entry form only through The Depository Trust Company
- redemption at the option of Royal Bank of Canada or the option of the holder
- interest on notes paid monthly, quarterly, semi-annually or annually
- unless otherwise set forth in the applicable pricing supplement, minimum denominations of \$1,000 and integral multiples of \$1,000 in excess thereof (except that non-U.S. investors may be subject to higher minimums)
- denominated in a currency other than U.S. dollars or in a composite currency
- settlement in immediately available funds

The final terms of each note will be included in a pricing supplement together with, in some cases, an applicable product prospectus supplement. We refer to pricing supplements and applicable product prospectus supplements, if any, as “pricing supplements.” If we sell all of the notes through agents and in the form of fixed or floating rate notes, we expect to receive between \$40,000,000,000 and \$39,800,000,000 of the proceeds from the sale of the notes, after paying the agents’ commissions of between \$0 and \$200,000,000. If we sell all of the notes through agents and in the form of indexed or other structured notes, we expect to receive between \$39,600,000,000 and \$38,000,000,000 of the proceeds from the sale of such notes, after paying the agents’ commission of between \$400,000,000 and \$2,000,000,000. See “Supplemental Plan of Distribution” for additional information about the agents’ commissions. The aggregate initial offering price of the notes is subject to reduction as a result of the sale by Royal Bank of Canada of other debt securities pursuant to another prospectus supplement to the accompanying prospectus.

See “Risk Factors” beginning on page S-1 to read about factors you should consider before investing in any notes.

Neither the Securities and Exchange Commission nor any state securities commission has approved or disapproved of the securities or passed upon the adequacy or accuracy of this prospectus supplement and the accompanying prospectus. Any representation to the contrary is a criminal offense.

The notes will not constitute deposits insured under the Canada Deposit Insurance Corporation Act or by the United States Federal Deposit Insurance Corporation or any other Canadian or United States governmental agency or instrumentality.

Royal Bank of Canada may sell the notes directly or through one or more agents or dealers, including the agents referred to under “Supplemental Plan of Distribution.” The agents are not required to sell any particular amount of the notes.

Royal Bank of Canada may use this prospectus supplement in the initial sale of any notes. In addition, Royal Bank of Canada, RBC Capital Markets, LLC or certain other affiliates of Royal Bank of Canada (the “Market-Makers”) may use this prospectus supplement and accompanying prospectus in market-making or other transactions in any note after its initial sale. A Market-Maker may engage in market-making transactions only in those jurisdictions in which it has all necessary governmental and regulatory authorizations for such activity.

Unless Royal Bank of Canada or its agent informs the purchaser otherwise in the confirmation of sale or pricing supplement, this prospectus supplement and accompanying prospectus are being used in a market-making transaction.

The date of this prospectus supplement is January 8, 2016.

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ABOUT THIS PROSPECTUS SUPPLEMENT

This prospectus supplement and the accompanying prospectus and, if applicable, a product prospectus supplement, provide you with a general description of the notes we may offer. Each time we sell notes we will provide a pricing supplement containing specific information about the terms of the notes being offered. Each pricing supplement may include a discussion of any risk factors or other special considerations that apply to those notes. The pricing supplement may also add, update or change the information in this prospectus supplement and any applicable product prospectus supplement. If there is any inconsistency between the information in this prospectus supplement or any applicable product prospectus supplement and any pricing supplement, you should rely on the information in that pricing supplement. In this prospectus supplement when we refer to this prospectus supplement we are also referring to any applicable product prospectus supplement unless the context otherwise requires.

RISK FACTORS

An investment in the notes is subject to the risks described below, as well as the risks described under “Risk Factors” in the accompanying prospectus. You should carefully consider whether the notes are suited to your particular circumstances. This prospectus supplement should be read together with the accompanying prospectus, any applicable product prospectus supplement and the relevant pricing supplement. The information in the accompanying prospectus is supplemented by, and to the extent inconsistent therewith replaced and superseded by, the information in this prospectus supplement, any applicable product prospectus supplement and the relevant pricing supplement. This section describes the most significant risks relating to the terms of the notes. We urge you to read the following information about these risks, together with the other information in this prospectus supplement, the accompanying prospectus, any applicable product prospectus supplement and the relevant pricing supplement, before investing in the notes.

General Risks Relating to the Notes

An Investment in the Notes Is Subject to Our Credit Risk

Any payment to be made on the notes depends on our ability to pay all amounts due on the notes on the interest payment dates, upon redemption and at maturity. Therefore, an investment in any of the notes issued under our medium-term note program is subject to our credit risk. The existence of a trading market for, and the market value of, any of the notes may be impacted by market perception of our creditworthiness. If market perception of our creditworthiness were to decline for any reason, the market value of your notes, and availability of the trading markets generally, may be adversely affected.

There May Be No Market through which the Notes May Be Sold, and Holders May Not Be Able to Sell the Notes

Unless otherwise specified in the relevant pricing supplement or any applicable product prospectus supplement, there may be no market through which the notes may be sold, and holders may not be able to sell the notes. This may affect the pricing of the notes in the secondary market, the transparency and availability of trading prices and the liquidity of the notes. Even if a secondary market for the notes develops, it may not provide significant liquidity or trade at prices advantageous to you. We expect that transaction costs in any secondary market would be high. As a result, the difference between bid and asked prices for your notes in any secondary market could be substantial.

If you are able to sell your notes before maturity, you may have to do so at a substantial discount from the issue price, and as a result, you may suffer substantial losses.

The Notes are Structurally Subordinated to the Liabilities of Our Subsidiaries

If we become insolvent, our governing legislation provides that priorities among payments of our deposit liabilities and payments of all of our other liabilities (including payments in respect of the notes) are to be determined in accordance with the laws governing priorities and, where applicable, by the terms of the indebtedness and liabilities. Because we have subsidiaries, your right to participate in any distribution of the assets of our banking or non-banking subsidiaries, upon a subsidiary's dissolution, winding-up, liquidation or reorganization or otherwise, and thus your ability to benefit indirectly from such distribution, is subject to the prior claims of creditors of that subsidiary, except to the extent that we may be a creditor of that subsidiary and our claims are recognized. There are legal limitations on the extent to which some of our subsidiaries may extend credit, pay dividends or otherwise supply funds to, or engage in transactions with, us or some of our other subsidiaries. Accordingly, the notes will be structurally subordinated to all existing and future liabilities of our subsidiaries, and holders of notes should look only to the assets of the Bank and not those of our subsidiaries for payments on the notes.

Risks Relating to Indexed Notes

We use the term “indexed notes” to mean notes whose value is linked to an underlying property or index. Indexed notes may present a high level of risk, and those who invest in indexed notes may lose their entire

investment. Indexed notes are complex and involve risks not associated with an investment in ordinary debt securities. You should thoroughly review each of an indexed note's offering documents for a comprehensive description of the risks associated with the offering. In addition, the treatment of indexed notes for U.S. federal income tax purposes is often unclear due to the absence of any authority specifically addressing the issues presented by any particular indexed note. Thus, if you propose to invest in indexed notes, you should independently evaluate the federal income tax consequences of purchasing an indexed note that apply in your particular circumstances. You should read "Tax Consequences—United States Taxation" in the accompanying prospectus and "Certain Income Tax Consequences—United States Taxation" in this prospectus supplement, for a discussion of U.S. tax matters.

The Return on Indexed Notes May Be Less Than the Return on Notes With a Similar Term that Are Not Indexed

Certain indexed notes provide for the repayment of principal at maturity, subject to our credit risk. Depending on the terms of such an indexed note, as specified in the relevant pricing supplement, you may not receive any periodic interest payments or receive only very low payments on such indexed note. As a result, the overall return on such indexed note may be less, and possibly significantly less, than the amount you would have earned by investing the principal or other amount you invest in such indexed note in a non-indexed debt security that bears interest at a prevailing market fixed or floating rate. For indexed notes that do not provide for the repayment of principal at maturity, see "—Investors in Indexed Notes Could Lose Their Investment" below.

Investors in Indexed Notes Could Lose Their Investment

The amount of principal and/or interest payable on an indexed note and the cash value or physical settlement value of a physically settled note will be determined by reference to the price, value or level of one or more securities, currencies, commodities or other properties, any other financial, economic or other measure or instrument, including the occurrence or non-occurrence of any event or circumstance, and/or one or more indices or baskets of any of these items. We refer to each of these as an "index." The direction and magnitude of the change in the price, value or level of the relevant index will determine the amount of principal and/or interest payable on the indexed note, and the cash value or physical settlement value of a physically settled note. The terms of a particular indexed note may or may not provide for the return of a percentage of the face amount at maturity or a minimum interest rate. Thus, if you purchase an indexed note, you may lose all or a portion of the principal or other amount you invest and may receive no interest on your investment.

The Issuer of a Security or Currency That Serves as an Index Could Take Actions That May Adversely Affect an Indexed Note

The issuer of a security that serves as an index or part of an index for an indexed note will have no involvement in the offer and sale of the indexed note and no obligations to the holder of the indexed note. The issuer may take actions, such as a merger or sale of assets, without regard to the interests of the holder. Any of these actions could adversely affect the value of a note indexed to that security or to an index of which that security is a component.

If the index for an indexed note includes a non-U.S. dollar currency or other asset denominated in a non-U.S. dollar currency, the government that issues that currency will also have no involvement in the offer and sale of the indexed note and no obligations to the holder of the indexed note. That government may take actions that could adversely affect the value of the note. See "—Risks Relating to Notes Denominated or Payable in or Linked to a Non-U.S. Dollar Currency" below for more information about these kinds of government actions.

An Indexed Note May Be Linked to a Volatile Index, Which Could Hurt the Value of Your Investment

Some indices are highly volatile, which means that their value may change significantly, up or down, over a short period of time. The amount of principal and/or interest that can be expected to become payable on an indexed note may vary substantially from time to time. Because the amounts payable with respect to an indexed note are generally calculated based on the price, value or level of the relevant index on a specified date or over a limited period of time, volatility in the index increases the risk that the return on the indexed note may be adversely affected by a fluctuation in the level of the relevant index. The volatility of an index may be affected by political or

economic events, including governmental actions, or by the activities of participants in the relevant markets. Any of these events or activities could adversely affect the value of an indexed note.

An Index to Which a Note Is Linked Could Be Changed or Become Unavailable

Some indices compiled by us or our affiliates or third parties may consist of or refer to several or many different securities, commodities or currencies or other instruments or measures. The compiler of such an index typically reserves the right to alter the composition of the index and the manner in which the value or level of the index is calculated. An alteration may result in a decrease in the value of or return on an indexed note that is linked to the index. The indices for our indexed notes may include published indices of this kind or customized indices developed by us or our affiliates in connection with particular issues of indexed notes.

A published index may become unavailable, or a customized index may become impossible to calculate in the normal manner, due to events such as war, natural disasters, cessation of publication of the index or a suspension or disruption of trading in one or more securities, commodities or currencies or other instruments or measures on which the index is based. If an index becomes unavailable or impossible to calculate in the normal manner, the terms of a particular indexed note may allow us to delay determining the amount payable as principal or interest on an indexed note, or we may use an alternative method to determine the value of the unavailable index. Alternative methods of valuation are generally intended to produce a value similar to the value resulting from reference to the relevant index. However, it is unlikely that any alternative method of valuation we use will produce a value identical to the value that the actual index would have produced. If we use an alternative method of valuation for a note linked to an index of this kind, the value of the note, or the rate of return on it, may be lower than it otherwise would be.

Some indexed notes are linked to indices that are not commonly used or that have been developed only recently. The lack of trading history may make it difficult to anticipate the volatility or other risks associated with an indexed note of this kind. In addition, trading in these indices or their underlying stocks, commodities or currencies or other instruments or measures, or options or futures contracts on these stocks, commodities or currencies or other instruments or measures, may be limited, which could increase their volatility and decrease the value of the related indexed notes or the rates of return on them.

Pricing Information About the Property Underlying a Relevant Index May Not Be Available

Special risks may also be presented because of differences in time zones between the United States and the market for the property underlying the relevant index, such that the underlying property is traded on a foreign exchange that is not open when the trading market for the notes in the United States, if any, is open or where trading occurs in the underlying property during times when the trading market for the notes in the United States, if any, is closed. In such cases, holders of the notes may have to make investment decisions at a time when current pricing information regarding the property underlying the relevant index is not available.

We May Engage in Hedging Activities That Could Adversely Affect an Indexed Note

In order to hedge an exposure on a particular indexed note, we may, directly or through our affiliates or other agents, enter into transactions involving the securities, commodities or currencies or other instruments or measures that underlie the index for the note, or involving derivative instruments, such as swaps, options or futures, on the index or any of its component items. To the extent that we enter into hedging arrangements with a non-affiliate, including a non-affiliated agent, such non-affiliate may enter into similar transactions. Engaging in transactions of this kind could adversely affect the value of an indexed note. It is possible that we or a hedging counterparty could achieve substantial returns from our hedging transactions while the value of the indexed note may decline.

Information About Indices Will Not Be Indicative of Future Performance

If we issue an indexed note, we may include historical information about the relevant index in the relevant pricing supplement. Any information about indices that we may provide will be furnished as a matter of information

only, and you should not regard the information as indicative of the range of, or trends in, fluctuations in the relevant index that may occur in the future.

We May Have Conflicts of Interest Regarding an Indexed Note

RBC Capital Markets, LLC and our other affiliates and unaffiliated agents may have conflicts of interest with respect to some indexed notes. RBC Capital Markets, LLC and our other affiliates and unaffiliated agents may engage in trading, including trading for hedging purposes, for their proprietary accounts or for other accounts under their management, in indexed notes and in the securities, commodities or currencies or other instruments or measures on which the index is based or in other derivative instruments related to the index or its component items. These trading activities could adversely affect the value of indexed notes. We and our affiliates and unaffiliated agents may also issue or underwrite securities or derivative instruments that are linked to the same index as one or more indexed notes. Introducing competing products into the marketplace in this manner could adversely affect the value of a particular indexed note.

RBC Capital Markets, LLC or another of our affiliates or an unaffiliated entity that provides us a hedge in respect of indexed notes may serve as calculation agent and/or exchange rate agent for the indexed notes and may have considerable discretion in calculating the amounts payable in respect of the notes. To the extent that RBC Capital Markets, LLC or another of our affiliates or such an unaffiliated entity sponsors, calculates or compiles a particular index, it may also have considerable discretion in performing the calculation or compilation of the index. For example, it may be permitted to change the methodology of the index or discontinue the publication of the index. Exercising discretion in this manner could adversely affect the value of an indexed note based on the index or the rate of return on the security.

Risks Relating to Floating Rate Notes

Floating Rates of Interest are Uncertain and Could be 0.0%

If your notes are floating rate notes or otherwise directly linked to a floating rate for some portion of the notes' term, no interest will accrue on the notes with respect to any interest period for which the applicable floating rate specified in the applicable pricing supplement is zero on the related interest rate reset date. Floating interest rates, by their very nature, fluctuate, and may be as low as 0.0%. Also, in certain economic environments, floating rates of interest may be less than fixed rates of interest for instruments with a similar credit quality and term. As a result, the return you receive on your notes may be less than a fixed rate security issued for a similar term by a comparable issuer.

Notes that bear interest at rates based on LIBOR and/or EURIBOR may be adversely affected by changes in our LIBOR or EURIBOR reporting practices or the method in which LIBOR and/or EURIBOR is determined

Regulators and law enforcement agencies from a number of governments have been conducting investigations relating to the calculation of the London Interbank Offered Rate ("LIBOR") across a range of maturities and currencies, and certain financial institutions that were member banks surveyed by the British Bankers' Association (the "BBA") in setting daily LIBOR have entered into agreements with the U.S. Department of Justice, the U.S. Commodity Futures Trading Commission and/or the U.K. Financial Services Authority in order to resolve the investigations. In addition, in September 2012, the U.K. government published the results of its review of LIBOR, which is commonly referred to as the "Wheatley Review". The Wheatley Review made a number of recommendations for changes with respect to LIBOR, including the introduction of statutory regulation of LIBOR, the transfer of responsibility for LIBOR from the BBA to an independent administrator, changes to the method of compilation of lending rates, new regulatory oversight and enforcement mechanisms for rate-setting and the corroboration of LIBOR, as far as possible, by transactional data. Based on the Wheatley Review, on March 25, 2013, final rules for the regulation and supervision of LIBOR by the U.K. Financial Conduct Authority (the "FCA") were published and came into effect on April 2, 2013 (the "FCA Rules"). In particular, the FCA Rules include requirements that (1) an independent LIBOR administrator monitor and survey LIBOR submissions to identify breaches of practice standards and/or potentially manipulative behavior, and (2) firms submitting data to LIBOR establish and maintain a clear conflicts of interest policy and appropriate systems and controls. The FCA Rules took effect on April 2, 2013.

In addition, in response to the Wheatley Review recommendations, ICE Benchmark Administration Limited (“IBA”) was appointed as the independent LIBOR administrator, from February 1, 2014.

Euribor-EBF has continued in its role as administrator of EURIBOR but has also undertaken a number of reforms in relation to its governance and technical framework since January 2013 pursuant to recommendations by the European Securities and Markets Authority and the European Banking Authority.

It is not possible to predict the further effect of the FCA Rules, any changes in the methods pursuant to which LIBOR or EURIBOR rates are determined or any other reforms to LIBOR or EURIBOR that may be enacted in the U.K., the European Union (the “EU”) and elsewhere, each of which may adversely affect the trading market for LIBOR- and EURIBOR-based securities, including any notes that bear interest at rates based on LIBOR or EURIBOR. In addition, any changes announced by the FCA, IBA, Euribor-EBF the European Commission or any other successor governance or oversight body, or future changes adopted by such body, in the method pursuant to which LIBOR or EURIBOR rates are determined may result in a sudden or prolonged increase or decrease in the reported LIBOR or EURIBOR rates. Changes in the methods pursuant to which other benchmark rates are determined, including some for which we contribute to the rate setting process, and other reforms to such benchmark rates are also being contemplated in the EU and other jurisdictions, and any such changes and reforms could result in a sudden or prolonged increase or decrease in the reported values of such other benchmark rates. If such changes and reforms were to be implemented and to the extent that the value of any notes that bear interest at rates based on LIBOR or EURIBOR is affected by reported LIBOR or EURIBOR rates, the level of interest payments and the value of such notes may be affected. Further, uncertainty as to the extent and manner in which the Wheatley Review recommendations and other proposed reforms will continue to be adopted and the timing of such changes may adversely affect the current trading market for such notes and the value of such notes.

Risks Relating to Notes Denominated or Payable in or Linked to a Non-U.S. Dollar Currency

If you intend to invest in a non-U.S. dollar note—e.g., a note whose principal and/or interest is payable in a currency other than U.S. dollars or that may be settled by delivery of or reference to a non-U.S. dollar currency or property denominated in or otherwise linked to a non-U.S. dollar currency—you should consult your own financial and legal advisors as to the currency risks entailed by your investment. Notes of this kind may not be an appropriate investment for investors who are unsophisticated with respect to non-U.S. dollar currency transactions. The information in this prospectus supplement is directed primarily at investors who are U.S. residents. Investors who are not U.S. residents should consult their own financial and legal advisors about currency-related risks particular to their investments.

An Investment in a Non-U.S. Dollar Note Involves Currency-Related Risks

An investment in a non-U.S. dollar note entails significant risks that are not associated with a similar investment in a note that is payable solely in U.S. dollars and where settlement value is not otherwise based on a non-U.S. dollar currency. These risks include the possibility of significant changes in rates of exchange between the U.S. dollar and the various non-U.S. dollar currencies or composite currencies and the possibility of the imposition or modification of foreign exchange controls or other conditions by either the United States or non-U.S. governments. These risks generally depend on factors over which we have no control, such as economic and political events and the supply of and demand for the relevant currencies in the global markets.

Changes in Currency Exchange Rates Can Be Volatile and Unpredictable

Rates of exchange between the U.S. dollar and many other currencies have been highly volatile, and this volatility may continue and perhaps spread to other currencies in the future. Fluctuations in currency exchange rates could adversely affect an investment in a note denominated in, or where value is otherwise linked to, a specified currency other than U.S. dollars. Depreciation of the specified currency against the U.S. dollar could result in a decrease in the U.S. dollar-equivalent value of payments on the note, including the principal payable at maturity. That in turn could cause the market value of the note to fall. Depreciation of the specified currency against the U.S. dollar could result in a loss to the investor on a U.S. dollar basis.

In courts outside of New York, investors may not be able to obtain judgment in a specified currency other than U.S. dollars. For example, a judgment for money in an action based on a non-U.S. dollar note in many other U.S. federal or state courts ordinarily would be enforced in the United States only in U.S. dollars. The date used to determine the rate of conversion of the currency in which any particular note is denominated into U.S. dollars will depend upon various factors, including which court renders the judgment.

Government Policy Can Adversely Affect Foreign Currency Exchange Rates and an Investment in a Non-U.S. Dollar Note

Foreign currency exchange rates can either float or be fixed by sovereign governments. From time to time, governments use a variety of techniques, such as intervention by a country's central bank or imposition of regulatory controls or taxes, to affect the exchange rate of their currencies. Governments may also issue a new currency to replace an existing currency or alter the exchange rate or exchange characteristics by devaluation or revaluation of a currency. Thus, a special risk in purchasing non-U.S. dollar notes is that their yields or payouts could be significantly and unpredictably affected by governmental actions. Even in the absence of governmental action directly affecting currency exchange rates, political or economic developments in the country issuing the specified currency for a non-U.S. dollar note or elsewhere could lead to significant and sudden changes in the exchange rate between the U.S. dollar and the specified currency. These changes could affect the value of the note as participants in the global currency markets move to buy or sell the specified currency or U.S. dollars in reaction to these developments.

Governments have imposed from time to time and may in the future impose exchange controls or other conditions, including taxes, with respect to the exchange or transfer of a specified currency that could affect exchange rates as well as the availability of a specified currency for a note at its maturity or on any other payment date. In addition, the ability of a holder to move currency freely out of the country in which payment in the currency is received or to convert the currency at a freely determined market rate could be limited by governmental actions.

Information About Exchange Rates Will Not Be Indicative of Future Performance

If we issue a non-U.S. dollar note, we may include in the relevant pricing supplement a currency supplement that provides information about historical exchange rates for the relevant non-U.S. dollar currency or currencies. Any information about exchange rates that we may provide will be furnished as a matter of information only, and you should not regard the information as indicative of the range of, or trends in, fluctuations in currency exchange rates that may occur in the future. That rate will likely differ from the exchange rate used under the terms that apply to a particular note.

Non-U.S. Investors May Be Subject to Certain Additional Risks

If we issue a U.S. dollar note and you are a non-U.S. investor who purchased such notes with a currency other than U.S. dollars, changes in rates of exchange may have an adverse effect on the value, price or income of your investment.

This prospectus supplement contains a general description of certain U.S. and Canadian tax consequences relating to the notes. If you are a non-U.S. investor, you should consult your tax advisors as to the consequences, under the tax laws of the country where you are resident for tax purposes, of acquiring, holding and disposing of notes and receiving payments of principal or other amounts under the notes.

Risks Relating to Changes in Canadian Law

No assurance can be given as to the impact of any possible judicial decision or change to the laws of the Provinces of Ontario and Québec and the federal laws of Canada applicable therein or administrative practice after the date of this prospectus supplement and before the date on which the notes are issued. Any such change could materially adversely impact the value of any notes affected by it. Such changes in law may include, but are not limited to, the introduction of a "bail-in" regime, described below, which may affect the rights of holders of securities issued by the Bank, including the notes.

Notes may be Subject to Write-Off, Write-Down or Conversion Under Current and Proposed Canadian Resolution Powers

The Canada Deposit Insurance Corporation, Canada's resolution authority, was granted additional powers in 2009 to transfer certain assets and liabilities of a bank to a newly created "bridge bank" for such consideration as it determines in the event of a bank getting into distress, presumably to facilitate a sale of the bank to another financial institution as a going concern. Upon exercise of such power, any remaining assets and liabilities would remain with the "bad bank" which would then be wound up. In this scenario, any liabilities of the Bank, such as the notes, that remain with the "bad bank" would be effectively written off or subject to only partial repayment in the ensuing winding-up.

On August 1, 2014, the Government of Canada's ("GoC") Department of Finance released its bail-in consultation paper: "Taxpayer Protection and Bank Recapitalization Regime". The proposed regime, which applies only to domestic systemically important banks ("D-SIBs"), is aimed at ensuring that (i) taxpayers are protected from having to bail out a systemically important bank in the highly unlikely event of such an institution running into difficulty, and (ii) Canada's financial system remains strong by clarifying that a bank's shareholders and creditors are responsible for bearing losses, thereby giving them stronger incentives to monitor the bank's risk-taking activities. The proposed regime focuses on a specific range of eligible liabilities (i.e. senior unsecured term wholesale debt that is tradable and transferable with an original term to maturity of over 400 days) and excludes deposits, shorter term unsecured wholesale debt and derivatives. In addition, insured deposits will continue to be guaranteed by the Canada Deposit Insurance Corporation. The GoC is proposing a statutory power allowing for the permanent conversion, in whole or in part, of the specified eligible liabilities into common shares of a bank. The GoC is also proposing that the conversion power only apply to the specified D-SIB liabilities that are issued, originated or renegotiated after an implementation date determined by the GoC. The regime would not be applied retroactively to liabilities outstanding as of the yet to be determined implementation date.

In the federal budget plan released on April 21, 2015, the GOC confirmed its intention to move forward with the Taxpayer Protection and Bank Recapitalization Regime, although no firm timetable was provided. If this proposed regime is implemented as currently proposed, any notes issued after such implementation that fall within the scope of eligible liabilities would be subject to the conversion powers described above and holders of such notes may receive common shares of the Bank in exchange for their notes in the event that the Bank ceases or is about to cease being viable. The implementation of the proposed bail-in regime could adversely affect the Bank's cost of funding and the value of notes issued after the implementation date. However, the proposed regime has not yet been finalized and is subject to change.

Risks Relating to United States Tax Law

U.S. Foreign Account Tax Compliance Act Withholding May Affect Payments on the Notes

The new reporting regime and potential withholding tax imposed by sections 1471 through 1474 of the U.S. Internal Revenue Code of 1986, as amended ("FATCA") may affect payments made to custodians or intermediaries in the payment chain leading to the ultimate investor if any such custodian or intermediary generally is unable to receive payments free of FATCA withholding. It also may affect payment to any ultimate investor that is a financial institution that is not entitled to receive payments free of withholding under FATCA, or an ultimate investor that fails to provide its broker (or other custodian or intermediary from which it receives payment) with any information, forms, other documentation or consents that may be necessary for the payments to be made free of FATCA withholding. Investors should choose the custodians or intermediaries with care (to ensure each is compliant with FATCA or other laws or agreements related to FATCA) and provide each custodian or intermediary with any information, forms, other documentation or consents that may be necessary for such custodian or intermediary to make a payment free of FATCA withholding. Investors should consult their own tax adviser to obtain a more detailed explanation of FATCA and how FATCA may affect them. The Bank's obligations under the notes are discharged once it has made payment to, or to the order of, the common depositary or common safekeeper for the clearing systems (as bearer or registered holder of the notes) and the Bank has therefore no responsibility for any amount thereafter transmitted through the clearing systems and custodians or intermediaries.

USE OF PROCEEDS

Except as otherwise set forth in a pricing supplement, the net proceeds from the sale of any notes will be added to our general funds and will be used for general banking purposes.

DESCRIPTION OF THE NOTES WE MAY OFFER

You should carefully read the description of the terms and provisions of our debt securities and our senior indenture under “Description of Debt Securities” in the accompanying prospectus. That section, together with this prospectus supplement, the relevant pricing supplement and any applicable product prospectus supplement, summarizes all the material terms of our senior indenture, our form of subordinated indenture and your note, as applicable. They do not, however, describe every aspect of our senior indenture, our form of subordinated indenture and your note, as applicable. For example, in this section entitled “Description of the Notes We May Offer”, the accompanying prospectus, the relevant pricing supplement and any applicable product prospectus supplement, we use terms that have been given special meanings in our senior indenture, but we describe the meanings of only the more important of those terms. The specific terms of any series of notes will be described in the relevant pricing supplement. As you read this section, please remember that the specific terms of your note as described in your pricing supplement will supplement and, if applicable, may modify or replace the general terms described in this section. If your pricing supplement is inconsistent with this prospectus supplement or the product prospectus supplement or the accompanying prospectus, your pricing supplement will control with regard to your note. Thus, the statements we make in this section may not apply to your note.

General

The notes will be issued under our senior indenture, dated as of October 23, 2003, between Royal Bank of Canada and The Bank of New York Mellon, as successor to the corporate trust business of JPMorgan Chase Bank, N.A., as trustee, as supplemented by a first supplemental indenture, dated as of July 21, 2006, and by the second supplemental indenture, dated as of February 28, 2007, and as further amended from time to time, which we may refer to as the Indenture. The notes constitute a single series of debt securities of Royal Bank of Canada issued under the indenture. The term “debt securities”, as used in this prospectus supplement, refers to all debt securities, including the notes, issued and issuable from time to time under the indenture. The indenture is subject to, and governed by, the Trust Indenture Act of 1939, as amended. The indenture is more fully described below in this section. Whenever we refer to specific provisions or defined terms in the indenture, those provisions or defined terms are incorporated in this prospectus supplement by reference. Section references used in this discussion are references to the indenture. Capitalized terms which are not otherwise defined shall have the meanings given to them in the indenture.

The notes will be limited to an aggregate initial offering price of US\$ 40,000,000,000 or at our option if so specified in the relevant pricing supplement, the equivalent of this amount in any other currency or currency unit, and will be our direct, unsecured obligations. This aggregate initial offering price is subject to reduction as a result of the sale by us of other debt securities pursuant to another prospectus supplement to the accompanying prospectus. The notes will not constitute deposits insured under the Canada Deposit Insurance Corporation Act or by the United States Federal Deposit Insurance Corporation or any other Canadian or United States governmental agency or instrumentality.

We will offer the notes on a continuous basis through one or more agents listed in the section entitled “Supplemental Plan of Distribution” in this prospectus supplement. The indenture does not limit the aggregate principal amount of senior notes that we may issue. We may, from time to time, without the consent of the holders of the notes, provide for the issuance of notes or other debt securities under the indenture in addition to the US\$40,000,000,000 aggregate initial offering price of notes noted on the cover of this prospectus supplement. Each note issued under this prospectus supplement will have a stated maturity that will be specified in the applicable pricing supplement and may be subject to redemption or repayment before its stated maturity. As a general matter, each note will mature nine months or more from its date of issue, except that indexed notes may have a maturity of less than nine months. Notes may be issued at significant discounts from their principal amount due on the stated maturity (or on any prior date on which the principal or an installment of principal of a note becomes due and payable, whether by the declaration of acceleration, call for redemption at our option, repayment at the option of the

holder or otherwise), and some notes may not bear interest. We may from time to time, without the consent of the existing holders of the relevant notes, create and issue further notes having the same terms and conditions as such notes in all respects, except for the issue date, issue price and, if applicable, the first payment of interest thereon.

Unless we specify otherwise in the relevant pricing supplement, currency amounts in this prospectus supplement are expressed in U.S. dollars. Unless we specify otherwise in any note and pricing supplement, the notes will be denominated in U.S. dollars and payments of principal, premium, if any, and any interest on the notes will be made in U.S. dollars. If any note is to be denominated other than exclusively in U.S. dollars, or if the principal of, premium, if any, or any interest on the note is to be paid in one or more currencies (or currency units or in amounts determined by reference to an index or indices) other than that in which that note is denominated, additional information (including authorized denominations and related exchange rate information) will be provided in the relevant pricing supplement. Unless we specify otherwise in any pricing supplement, notes denominated in U.S. dollars will be issued in minimum denominations of \$1,000 and integral multiples of \$1,000 in excess thereof (except that non-U.S. investors may be subject to higher minimums).

Interest rates that we offer on the notes may differ depending upon, among other factors, the aggregate principal amount of notes purchased in any single transaction. Notes with different variable terms other than interest rates may also be offered concurrently to different investors. We may change interest rates or formulas and other terms of notes from time to time, but no change of terms will affect any note we have previously issued or as to which we have accepted an offer to purchase.

Each note will be issued as a book-entry note in fully registered form without coupons. Each note issued in book-entry form may be represented by a global note that we deposit with and register in the name of a financial institution or its nominee, that we select. The financial institution that we select for this purpose is called the depository. Unless we specify otherwise in the applicable pricing supplement, The Depository Trust Company, New York, New York, will be the depository for all notes in global form. Except as discussed in the accompanying prospectus under “Description of Debt Securities—Ownership and Book-Entry Issuance”, owners of beneficial interests in book-entry notes will not be entitled to physical delivery of notes in certificated form. We will make payments of principal of, and premium, if any and interest, if any, on the notes through the applicable trustee to the depository for the notes.

Legal Ownership

Street Name and Other Indirect Holders

Investors who hold their notes in accounts at brokers, banks or other financial institutions will generally not be recognized by us as legal holders of notes. This is called holding in street name. Instead, we would recognize only the bank or broker, or the financial institution the bank or broker uses to hold its notes. These intermediary banks, brokers and other financial institutions pass along principal, interest and other payments on the notes, either because they agree to do so in their customer agreements or because they are legally required to do so. If you hold your notes in street name, you should check with your own institution to find out:

- how it handles note payments and notices;
- whether it imposes fees or charges;
- how it would handle voting if it were ever required;
- whether and how you can instruct it to send you notes registered in your own name so you can be a direct holder as described below; and
- how it would pursue rights under the notes if there were a default or other event triggering the need for holders to act to protect their interests.

Direct Holders

Our obligations, as well as the obligations of the trustee and those of any third parties employed by us or the trustee, under the notes run only to persons who are registered as holders of notes. As noted above, we do not have obligations to you if you hold in street name or other indirect means, either because you choose to hold your notes in that manner or because the notes are issued in the form of global notes as described below. For example, once we make payment to the registered holder we have no further responsibility for the payment even if that holder is legally required to pass the payment along to you as a street name customer but does not do so.

Global Notes

A global note is a special type of indirectly held security, as described above under “—Street Name and Other Indirect Holders.” If we choose to issue notes in the form of global notes, the ultimate beneficial owners of global notes can only be indirect holders. We require that the global note be registered in the name of a financial institution we select.

We also require that the notes included in the global note not be transferred to the name of any other direct holder except in the special circumstances described in the accompanying prospectus in the section “Description of Debt Securities—Ownership and Book-Entry Issuance.” The financial institution that acts as the sole direct holder of the global note is called the depository. Any person wishing to own a global note must do so indirectly by virtue of an account with a broker, bank or other financial institution, known as a “participant”, that in turn has an account with the depository. The pricing supplement indicates whether your series of notes will be issued only in the form of global notes.

Further details of legal ownership are discussed in the accompanying prospectus in the section “Ownership and Book-Entry Issuance.”

In the remainder of this description, “you” or “holder” means direct holders and not street name or other indirect holders of notes. Indirect holders should read the previous subsection titled “—Street Name and Other Indirect Holders.”

Types of Notes

We may issue the following three types of notes:

- *Fixed Rate Notes.* A note of this type will bear interest at a fixed rate described in the applicable pricing supplement. This type includes zero-coupon notes, which bear no interest and are instead issued at a price lower than the principal amount.
- *Floating Rate Notes.* A note of this type will bear interest at rates that are determined by reference to an interest rate formula. In some cases, the rates may also be adjusted by adding or subtracting a spread or multiplying by a spread multiplier and may be subject to a minimum rate or a maximum rate. The various interest rate formulas and these other features are described below under “—Interest Rates—Floating Rate Notes.” If your note is a floating rate note, the formula and any adjustments that apply to the interest rate will be specified in your pricing supplement.
- *Indexed Notes.* A note of this type provides that the principal amount payable at its maturity, and/or the amount of interest payable on an interest payment date, will be determined by reference to:
 - one or more securities;
 - one or more currencies;
 - one or more commodities;

- any other financial, economic or other measures or instruments, including the occurrence or non-occurrence of any event or circumstance; and/or
- indices or baskets of any of these items.

If you are a holder of an indexed note, you may receive a principal amount at maturity that is greater than or less than the face amount of your note depending upon the value of the applicable index at maturity. That value may fluctuate over time. If you purchase an indexed note, your pricing supplement will include information about the relevant index and how amounts that are to become payable will be determined by reference to that index. In addition, your pricing supplement will specify whether your note will be exchangeable for, or payable in cash, securities of an issuer other than Royal Bank of Canada or other property. Before you purchase any indexed note, you should read carefully the section entitled “Risk Factors—Risks Relating to Indexed Notes” above.

Original Issue Discount Notes

A fixed rate note, a floating rate note or an indexed note may be an original issue discount note. A note of this type is issued at a price lower than its principal amount and provides that, upon redemption or acceleration of its maturity, an amount less than its principal amount will be payable. An original issue discount note may be a zero-coupon note. A note issued at a discount to its principal may, for U.S. federal income tax purposes, be considered an original issue discount note, regardless of the amount payable upon redemption or acceleration of maturity. See “Tax Consequences—United States Taxation—Original Issue Discount” in the accompanying prospectus for a brief description of the U.S. federal income tax consequences of owning an original issue discount note.

Information in the Pricing Supplement

Your pricing supplement will describe one or more of the following terms of your note:

- the stated maturity;
- the specified currency or currencies for principal and interest, if not U.S. dollars;
- the price at which we originally issue your note, expressed as a percentage of the principal amount, and the original issue date;
- whether your note is a fixed rate note, a floating rate note or an indexed note;
- if your note is a fixed rate note, the yearly rate at which your note will bear interest, if any, and the interest payment dates;
- if your note is a floating rate note, the interest rate basis, which may be one of the eight interest rate bases described under “—Interest Rates—Floating Rate Notes” below; any applicable index currency or maturity, spread or spread multiplier or initial, maximum or minimum rate; and the interest reset, determination, calculation and payment dates, all of which we describe under “—Interest Rates—Floating Rate Notes” below;
- if your note is an indexed note, the principal amount, if any, we will pay you at maturity, the amount of interest, if any, we will pay you on an interest payment date or the formula we will use to calculate these amounts, if any, and whether your note will be exchangeable in cash, securities of an issuer other than Royal Bank of Canada or other property;
- if your note is an original issue discount note, the yield to maturity;
- if applicable, the circumstances under which your note may be redeemed at our option before the stated maturity, including any redemption commencement date, redemption price(s) and redemption period(s);

- if applicable, the circumstances under which you may demand repayment of your note before the stated maturity, including any repayment commencement date, repayment price(s) and repayment period(s);
- any special Canadian or United States federal income tax consequences of the purchase, ownership or disposition of a particular issuance of notes;
- the use of proceeds, if materially different than those discussed in this prospectus supplement; and
- any other terms of your note, which could be different from those described in this prospectus supplement.

Market-Making Transactions

If you purchase your note in a market-making transaction, you will receive information about the price you pay and your trade and settlement dates in a separate confirmation of sale. A market-making transaction is one in which an agent or other person resells a note that it has previously acquired from another holder. A market-making transaction in a particular note occurs after the original sale of the note.

Redemption at the Option of Royal Bank of Canada; No Sinking Fund

If an initial redemption date is specified in the applicable pricing supplement, we may redeem the particular notes prior to their stated maturity date at our option on any date on or after that initial redemption date in whole or from time to time in part in increments of \$1,000 or any other integral multiple of an authorized denomination specified in the applicable pricing supplement (provided that any remaining principal amount thereof shall be at least \$1,000 or other minimum authorized denomination applicable thereto), at the redemption price or prices specified in that pricing supplement, together with unpaid interest accrued thereon to the date of redemption. Unless otherwise specified in the applicable pricing supplement, we must give written notice to registered holders of the particular notes to be redeemed at our option not more than 60 nor less than 30 calendar days prior to the date of redemption.

The notes will not be subject to, or entitled to the benefit of, any sinking fund.

Repayment at the Option of the Holder

If one or more optional repayment dates are specified in the applicable pricing supplement, registered holders of the particular notes may require us to repay those notes prior to their stated maturity date on any optional repayment date in whole or from time to time in part in increments of \$1,000 or any other integral multiple of an authorized denomination specified in the applicable pricing supplement (provided that any remaining principal amount thereof shall be at least \$1,000 or other minimum authorized denomination applicable thereto), at the repayment price or prices specified in that pricing supplement, together with unpaid interest accrued thereon to the date of repayment. A registered holder's exercise of the repayment option will be irrevocable.

For any note to be repaid, the applicable trustee must receive, at its corporate trust office in the Borough of Manhattan, The City of New York, not more than 60 nor less than 30 calendar days prior to the date of repayment, the particular notes to be repaid and, in the case of a book-entry note, repayment instructions from the applicable beneficial owner to the depositary and forwarded by the depositary. Only the depositary may exercise the repayment option in respect of global notes representing book-entry notes. Accordingly, beneficial owners of global notes that desire to have all or any portion of the book-entry notes represented thereby repaid must instruct the participant through which they own their interest to direct the depositary to exercise the repayment option on their behalf by forwarding the repayment instructions to the applicable trustee as aforesaid. In order to ensure that these instructions are received by the applicable trustee on a particular day, the applicable beneficial owner must so instruct the participant through which it owns its interest before that participant's deadline for accepting instructions for that day. Different firms may have different deadlines for accepting instructions from their customers. Accordingly, beneficial owners should consult their participants for the respective deadlines. In addition, at the time

repayment instructions are given, each beneficial owner shall cause the participant through which it owns its interest to transfer the beneficial owner's interest in the global note representing the related book-entry notes, on the depository's records, to the applicable trustee.

If applicable, we will comply with the requirements of Section 14(e) of the Securities Exchange Act of 1934, as amended (the "Exchange Act"), and the rules promulgated thereunder, and any other securities laws or regulations in connection with any repayment of notes at the option of the registered holders thereof.

We may at any time purchase notes at any price or prices in the open market or otherwise. Notes so purchased by us may, at our discretion, be held, resold or surrendered to the applicable trustee for cancellation.

Interest

Each interest-bearing note will bear interest from its date of issue at the rate per annum, in the case of a fixed rate note, or pursuant to the interest rate formula, in the case of a floating rate note, in each case as specified in the applicable pricing supplement, until the principal thereof is paid. We will make interest payments in respect of fixed rate notes and floating rate notes in an amount equal to the interest accrued from and including the immediately preceding interest payment date in respect of which interest has been paid or from and including the date of issue, if no interest has been paid, to but excluding the applicable interest payment date or the maturity date, as the case may be (each, an "interest period").

Interest on fixed rate notes and floating rate notes will be payable in arrears on each interest payment date and on the maturity date. The first payment of interest on any note originally issued between a regular record date and the related interest payment date will be made on the interest payment date immediately following the next succeeding record date to the registered holder on the next succeeding record date. The "regular record date" shall be the fifteenth calendar day, whether or not a "business day", immediately preceding the related interest payment date. "Business day" is defined below under "—Interest Rates—Special Rate Calculation Terms." For the purpose of determining the holder at the close of business on a regular record date when business is not being conducted, the close of business will mean 5:00 P.M., New York City time, on that day.

Interest Rates

This subsection describes the different kinds of interest rates that may apply to your note, if it bears interest.

Fixed Rate Notes

The relevant pricing supplement will specify the interest payment dates for a fixed rate note as well as the maturity date. Interest on fixed rate notes will be computed on the basis of a 360-day year consisting of twelve 30-day months or such other day count fraction set forth in the pricing supplement.

If any interest payment date, redemption date, repayment date or maturity date of a fixed rate note falls on a day that is not a business day, we will make the required payment of principal, premium, if any, and/or interest on the next succeeding business day, and no additional interest will accrue in respect of the payment made on that next succeeding business day.

Floating Rate Notes

In this subsection, we use several specialized terms relating to the manner in which floating interest rates are calculated. These terms appear in bold, italicized type the first time they appear, and we define these terms under "—Special Rate Calculation Terms" at the end of this subsection.

The following will apply to floating rate notes:

Interest Rate Basis. We currently expect to issue floating rate notes that bear interest at rates based on one or more of the following interest rate bases:

- commercial paper rate;
- U.S. prime rate;
- LIBOR;
- EURIBOR;
- treasury rate;
- CMT rate;
- CMS rate; and/or
- federal funds rate.

We describe each of the interest rate bases in further detail below in this subsection. If you purchase a floating rate note, your pricing supplement will specify the interest rate basis that applies to your note.

Calculation of Interest. Calculations relating to floating rate notes will be made by the calculation agent, an institution that we appoint as our agent for this purpose. That institution may include any affiliate of ours, such as RBC Capital Markets, LLC. The pricing supplement for a particular floating rate note will name the institution that we have appointed to act as the calculation agent for that note as of its original issue date. We may appoint a different institution to serve as calculation agent from time to time after the original issue date of the note without your consent and without notifying you of the change.

For each floating rate note, the calculation agent will determine, on the corresponding interest calculation date or on the interest determination date, as described below, the interest rate that takes effect on each interest reset date. In addition, the calculation agent will calculate the amount of interest that has accrued during each interest period—that is, the period from and including the original issue date, or the last date to which interest has been paid or made available for payment, to but excluding the payment date. For each interest period, the calculation agent will calculate the amount of accrued interest by multiplying the face or other specified amount of the floating rate note by an accrued interest factor for the interest period. This factor will equal the sum of the interest factors calculated for each day during the interest period. The interest factor for each day will be expressed as a decimal and will be calculated by dividing the interest rate, also expressed as a decimal, applicable to that day by 360 or by the actual number of days in the year, as specified in the relevant pricing supplement.

Upon the request of the holder of any floating rate note, the calculation agent will provide for that note the interest rate then in effect—and, if determined, the interest rate that will become effective on the next interest reset date. The calculation agent’s determination of any interest rate, and its calculation of the amount of interest for any interest period, will be final and binding in the absence of manifest error.

All percentages resulting from any calculation relating to a note will be rounded upward or downward, as appropriate, to the next higher or lower one hundred-thousandth of a percentage point, *e.g.*, 9.876541% (or .09876541) being rounded down to 9.87654% (or .0987654) and 9.876545% (or .09876545) being rounded up to 9.87655% (or .0987655). All amounts used in or resulting from any calculation relating to a floating rate note will be rounded upward or downward, as appropriate, to the nearest cent, in the case of U.S. dollars, or to the nearest corresponding hundredth of a unit, in the case of a currency other than U.S. dollars, with one-half cent or one-half of a corresponding hundredth of a unit or more being rounded upward.

In determining the interest rate basis that applies to a floating rate note during a particular interest period, the calculation agent may obtain rate quotes from various banks or dealers active in the relevant market, as discussed

below. Those reference banks and dealers may include the calculation agent itself and its affiliates, as well as any agent participating in the distribution of the relevant floating rate notes and its affiliates, and they may include our affiliates.

Initial Interest Rate. For any floating rate note, the interest rate in effect from the original issue date to the first interest reset date will be the initial interest rate. We will specify the initial interest rate or the manner in which it is determined in the relevant pricing supplement.

Spread or Spread Multiplier. In some cases, the interest rate basis for a floating rate note may be adjusted:

- by adding or subtracting a specified number of basis points, called the spread, with one basis point being 0.01%; or
- by multiplying the interest rate basis by a specified percentage, called the spread multiplier.

If you purchase a floating rate note, your pricing supplement will indicate whether a spread or spread multiplier will apply to your note and, if so, the amount of the spread or spread multiplier.

Maximum and Minimum Rates. The actual interest rate, after being adjusted by the spread or spread multiplier, may also be subject to either or both of the following limits:

- a maximum rate—*i.e.*, a specified upper limit that the actual interest rate in effect at any time may not exceed; and/or
- a minimum rate—*i.e.*, a specified lower limit that the actual interest rate in effect at any time may not fall below.

If you purchase a floating rate note, your pricing supplement will indicate whether a maximum rate and/or minimum rate will apply to your note and, if so, what those rates are.

Whether or not a maximum rate applies, the interest rate on a floating rate note will in no event be higher than the maximum rate permitted by New York law, as it may be modified by U.S. law of general application and the *Criminal Code* (Canada). Under current New York law, the maximum rate of interest, with some exceptions, for any loan in an amount less than \$250,000 is 16% and for any loan in the amount of \$250,000 or more but less than \$2,500,000 is 25% per year on a simple interest basis. These limits do not apply to loans of \$2,500,000 or more, except for the *Criminal Code* (Canada), which limits the rate to 60%.

The rest of this subsection describes how the interest rate and the interest payment dates will be determined, and how interest will be calculated, on a floating rate note.

Interest Reset Dates. The rate of interest on a floating rate note will be reset, by the calculation agent described below, daily, weekly, monthly, quarterly, semi-annually or annually. The date on which the interest rate resets and the reset rate becomes effective is called the interest reset date. Except as otherwise specified in the applicable pricing supplement, the interest reset date will be as follows:

- for floating rate notes that reset daily, each business day;
- for floating rate notes that reset weekly and are not treasury rate notes, the Wednesday of each week;
- for treasury rate notes that reset weekly, the Tuesday of each week;
- for floating rate notes that reset monthly, the third Wednesday of each month;
- for floating rate notes that reset quarterly, the third Wednesday of each of four months of each year as indicated in the relevant pricing supplement;

- for floating rate notes that reset semi-annually, the third Wednesday of each of two months of each year as indicated in the relevant pricing supplement; and
- for floating rate notes that reset annually, the third Wednesday of one month of each year as indicated in the relevant pricing supplement.

For a floating rate note, the interest rate in effect on any particular day will be the interest rate determined with respect to the latest interest reset date that occurs on or before that day. There are several exceptions, however, to the reset provisions described above.

If any interest reset date for a floating rate note would otherwise be a day that is not a business day, the interest reset date will be postponed to the next day that is a business day. For a LIBOR or EURIBOR note, however, if that business day is in the next succeeding calendar month, the interest reset date will be the immediately preceding business day.

Interest Determination Dates. The interest rate that takes effect on an interest reset date will be determined by the calculation agent by reference to a particular date called an interest determination date. Except as otherwise indicated in the relevant pricing supplement:

- for commercial paper rate, federal funds rate and U.S. prime rate notes, the interest determination date relating to a particular interest reset date will be the business day preceding the interest reset date;
- for LIBOR notes, the interest determination date relating to a particular interest reset date will be the second *London business day* preceding the interest reset date, unless the *index currency* is pounds sterling, in which case the interest determination date will be the interest reset date. We refer to an interest determination date for a LIBOR note as a LIBOR interest determination date;
- for EURIBOR notes, the interest determination date relating to a particular interest reset date will be the second *euro business day* preceding the interest reset date. We refer to an interest determination date for a EURIBOR note as a EURIBOR interest determination date;
- for treasury rate notes, the interest determination date relating to a particular interest reset date, which we refer to as a treasury interest determination date, will be the day of the week in which the interest reset date falls on which treasury bills—*i.e.*, direct obligations of the U.S. government—would normally be auctioned. Treasury bills are usually sold at auction the Monday of each week, unless that day is a legal holiday, in which case the auction is usually held on the following Tuesday, except that the auction may be held on the preceding Friday. If as the result of a legal holiday an auction is held the preceding Friday, that Friday will be the treasury interest determination date relating to the interest reset date occurring in the next succeeding week; and
- for CMT rate and CMS rate notes, the interest determination date relating to a particular interest reset date will be the second business day preceding the interest reset date.

The interest determination date pertaining to a floating rate note the interest rate of which is determined with reference to two or more interest rate bases will be the latest business day which is at least two business days before the related interest reset date for the applicable floating rate note on which each interest rate basis is determinable.

Interest Calculation Dates. As described above, the interest rate that takes effect on a particular interest reset date will be determined by reference to the corresponding interest determination date. Except for LIBOR notes and EURIBOR notes, however, the determination of the rate will actually be made on a day no later than the corresponding interest calculation date. The interest calculation date will be the earlier of the following:

- the tenth calendar day after the interest determination date or, if that tenth calendar day is not a business day, the next succeeding business day; and

- the business day immediately preceding the interest payment date or the maturity, whichever is the day on which the next payment of interest will be due.

The calculation agent need not wait until the relevant interest calculation date to determine the interest rate if the rate information it needs to make the determination is available from the relevant sources sooner.

Interest Payment Dates. The interest payment dates for a floating rate note will depend on when the interest rate is reset and, unless we specify otherwise in the relevant pricing supplement, will be as follows:

- for floating rate notes that reset daily, weekly or monthly, the third Wednesday of each month;
- for floating rate notes that reset quarterly, the third Wednesday of the four months of each year specified in the relevant pricing supplement;
- for floating rate notes that reset semi-annually, the third Wednesday of the two months of each year specified in the relevant pricing supplement; or
- for floating rate notes that reset annually, the third Wednesday of the month specified in the relevant pricing supplement.

Regardless of these rules, if a note is originally issued after the regular record date and before the date that would otherwise be the first interest payment date, the first interest payment date will be the date that would otherwise be the second interest payment date.

In addition, the following special provision will apply to a floating rate note with regard to any interest payment date other than one that falls on the maturity. If the interest payment date would otherwise fall on a day that is not a business day, then the interest payment date will be the next day that is a business day. However, if the floating rate note is a LIBOR note or a EURIBOR note and the next business day falls in the next calendar month, then the interest payment date will be advanced to the next preceding day that is a business day. If the maturity date of a floating rate note falls on a day that is not a business day, we will make the required payment of principal, premium, if any, and interest on the next succeeding business day, and no additional interest will accrue in respect of the payment made on that next succeeding business day.

Calculation Agent. We have initially appointed The Bank of New York Mellon as our calculation agent for the notes. See “—Calculation of Interest” above for details regarding the role of the calculation agent.

Commercial Paper Rate Notes

If you purchase a commercial paper rate note, your note will bear interest at an interest rate equal to the commercial paper rate and adjusted by the spread or spread multiplier, if any, indicated in your pricing supplement.

The commercial paper rate will be the **money market yield** of the rate, for the relevant interest determination date, for commercial paper having the **index maturity** indicated in your pricing supplement, as published in **H.15(519)** under the heading “Commercial Paper—Nonfinancial.” If the commercial paper rate cannot be determined as described above, the following procedures will apply:

- If the rate described above does not appear in H.15(519) by 3:00 P.M., New York City time, on the relevant interest calculation date, unless the calculation is made earlier and the rate is available from that source at that time, then the commercial paper rate will be the rate, for the relevant interest determination date, for commercial paper having the index maturity specified in your pricing supplement, as published in **H.15 daily update** or any other recognized electronic source used for displaying that rate, under the heading “Commercial Paper—Nonfinancial.”
- If the rate described above does not appear in H.15(519), H.15 daily update or another recognized electronic source by 3:00 P.M., New York City time, on the relevant interest calculation date, unless

the calculation is made earlier and the rate is available from one of those sources at that time, the commercial paper rate will be the money market yield of the arithmetic mean of the following offered rates for U.S. dollar commercial paper that has the relevant index maturity and is placed for an industrial issuer whose bond rating is “Aa”, or the equivalent, from a nationally recognized rating agency: the rates offered as of 11:00 A.M., New York City time, on the relevant interest determination date, by three leading U.S. dollar commercial paper dealers in New York City selected by the calculation agent.

- If fewer than three dealers selected by the calculation agent are quoting as described above, the commercial paper rate for the new interest period will be the commercial paper rate in effect for the prior interest period. If the initial interest rate has been in effect for the prior interest period, however, it will remain in effect for the new interest period.

U.S. Prime Rate Notes

If you purchase a U.S. prime rate note, your note will bear interest at an interest rate equal to the U.S. prime rate and adjusted by the spread or spread multiplier, if any, indicated in your pricing supplement.

The U.S. prime rate will be the rate, for the relevant interest determination date, published in H.15(519) opposite the heading “Bank prime loan.” If the U.S. prime rate cannot be determined as described above, the following procedures will apply:

- If the rate described above does not appear in H.15(519) by 3:00 P.M., New York City time, on the relevant interest calculation date, unless the calculation is made earlier and the rate is available from that source at that time, then the U.S. prime rate will be the rate, for the relevant interest determination date, as published in H.15 daily update or another recognized electronic source used for the purpose of displaying that rate, under the heading “Bank prime loan.”
- If the rate described above does not appear in H.15(519), H.15 daily update or another recognized electronic source by 3:00 P.M., New York City time, on the relevant interest calculation date, unless the calculation is made earlier and the rate is available from one of those sources at that time, then the U.S. prime rate will be the arithmetic mean of the following rates as they appear on the **Reuters screen US PRIME 1 page**: the rate of interest publicly announced by each bank appearing on that page as that bank’s prime rate or base lending rate, as of 11:00 A.M., New York City time, on the relevant interest determination date.
- If fewer than four of these rates appear on the Reuters screen US PRIME 1 page, the U.S. prime rate will be the arithmetic mean of the prime rates or base lending rates, as of the close of business on the relevant interest determination date, of three major banks in New York City selected by the calculation agent. For this purpose, the calculation agent will use rates quoted on the basis of the actual number of days in the year divided by a 360-day year.
- If fewer than three banks selected by the calculation agent are quoting as described above, the U.S. prime rate for the new interest period will be the U.S. prime rate in effect for the prior interest period. If the initial interest rate has been in effect for the prior interest period, however, it will remain in effect for the new interest period.

LIBOR Notes

If you purchase a LIBOR note, your note will bear interest at an interest rate equal to LIBOR, which will be the London interbank offered rate for deposits in U.S. dollars or any other index currency, as noted in your pricing supplement. In addition, when LIBOR is the interest rate basis the applicable LIBOR rate will be adjusted by the spread or spread multiplier, if any, indicated in your pricing supplement. LIBOR will be determined in the following manner:

- LIBOR will be the offered rate appearing on the **Reuters screen LIBOR Page** as of 11:00 A.M., London time, on the relevant LIBOR interest determination date, for deposits of the relevant index currency having the relevant index maturity beginning on the relevant interest reset date. Your pricing supplement will indicate the index currency, the index maturity and the reference page that apply to your LIBOR note. If no index currency is mentioned in your pricing supplement, the index currency for your LIBOR note will be U.S. dollars, and if no reference page is mentioned in your pricing supplement, Reuters Page LIBOR01 will apply to your LIBOR note.
- If the rate described above does not appear on that page, then LIBOR will be determined on the basis of the rates, at approximately 11:00 A.M., London time, on the relevant LIBOR interest determination date, at which deposits of the following kind are offered to prime banks in the London interbank market by four major banks in that market selected by the calculation agent: deposits of the index currency having the relevant index maturity, beginning on the relevant interest reset date, and in a **representative amount**. The calculation agent will request the principal London office of each of these banks to provide a quotation of its rate. If at least two quotations are provided, LIBOR for the relevant LIBOR interest determination date will be the arithmetic mean of the quotations.
- If fewer than two quotations are provided as described above, LIBOR for the relevant interest reset date will be the arithmetic mean of the rates for loans of the following kind to leading European banks quoted, at approximately 11:00 A.M., in the applicable **principal financial center**, on that LIBOR interest determination date, by three major banks in that financial center selected by the calculation agent: loans of the index currency having the relevant index maturity, beginning on the relevant interest reset date and in a representative amount.
- If fewer than three banks selected by the calculation agent are quoting as described above, LIBOR for the new interest period will be LIBOR in effect for the prior interest period. If the initial interest rate has been in effect for the prior interest period, however, it will remain in effect for the new interest period.

EURIBOR Notes

If you purchase a EURIBOR note, your note will bear interest at an interest rate equal to the interest rate for deposits in euro, designated as “EURIBOR” and sponsored jointly by the European Banking Federation and ACI—the Financial Market Association, or any company established by the joint sponsors for purposes of compiling and publishing that rate. In addition, when EURIBOR is the interest rate basis the EURIBOR base rate will be adjusted by the spread or spread multiplier, if any, specified in your pricing supplement. EURIBOR will be determined in the following manner:

- EURIBOR will be the offered rate for deposits in euros having the index maturity specified in your pricing supplement, beginning on the second euro business day after the relevant EURIBOR interest determination date, as that rate appears on **Reuters page EURIBOR01** as of 11:00 A.M., Brussels time, on the relevant EURIBOR interest determination date.
- If the rate described above does not appear on Reuters page EURIBOR01, EURIBOR will be determined on the basis of the rates, at approximately 11:00 A.M., Brussels time, on the relevant EURIBOR interest determination date, at which deposits of the following kind are offered to prime banks in the **euro-zone** interbank market by the principal euro-zone office of each of four major banks in that market selected by the calculation agent: euro deposits having the relevant index maturity, beginning on the relevant interest reset date, and in a representative amount. The calculation agent will request the principal euro-zone office of each of these banks to provide a quotation of its rate. If at least two quotations are provided, EURIBOR for the relevant EURIBOR interest determination date will be the arithmetic mean of the quotations.
- If fewer than two quotations are provided as described above, EURIBOR for the relevant EURIBOR interest determination date will be the arithmetic mean of the rates for loans of the following kind to leading euro-zone banks quoted, at approximately 11:00 A.M., Brussels time on that EURIBOR interest

determination date, by three major banks in the euro-zone selected by the calculation agent: loans of euros having the relevant index maturity, beginning on the relevant interest reset date, and in a representative amount.

- If fewer than three banks selected by the calculation agent are quoting as described above, EURIBOR for the new interest period will be EURIBOR in effect for the prior interest period. If the initial interest rate has been in effect for the prior interest period, however, it will remain in effect for the new interest period.

Treasury Rate Notes

If you purchase a treasury rate note, your note will bear interest at an interest rate equal to the treasury rate and adjusted by the spread or spread multiplier, if any, indicated in your pricing supplement.

The treasury rate will be the rate for the auction, on the relevant treasury interest determination date, of treasury bills having the index maturity specified in your pricing supplement, as that rate appears on **Reuters page USAUCTION 10** or **Reuters page USAUCTION11** under the heading “INVEST RATE”. If the treasury rate cannot be determined in this manner, the following procedures will apply:

- If the rate described above does not appear on either page by 3:00 P.M., New York City time, on the relevant interest calculation date, unless the calculation is made earlier and the rate is available from that source at that time, the treasury rate will be the **bond equivalent yield** of the rate, for the relevant interest determination date, for the type of treasury bill described above, as announced by the U.S. Department of the Treasury.
- If the auction rate described in the prior paragraph is not so announced by 3:00 P.M., New York City time, on the relevant interest calculation date, or if no such auction is held for the relevant week, then the treasury rate will be the bond equivalent yield of the rate, for the relevant treasury interest determination date and for treasury bills having the specified index maturity, as published in H.15(519) under the heading “U.S. government securities/Treasury bills (secondary market).”
- If the rate described in the prior paragraph does not appear in H.15(519) by 3:00 P.M., New York City time, on the relevant interest calculation date, unless the calculation is made earlier and the rate is available from one of those sources at that time, then the treasury rate will be the rate, for the relevant treasury interest determination date and for treasury bills having the specified index maturity, as published in H.15 daily update, or another recognized electronic source used for displaying that rate, under the heading “U.S. government securities/Treasury bills (secondary market).”
- If the rate described in the prior paragraph does not appear in H.15 daily update or another recognized electronic source by 3:00 P.M., New York City time, on the relevant interest calculation date, unless the calculation is made earlier and the rate is available from one of those sources at that time, the treasury rate will be the **bond equivalent yield** of the arithmetic mean of the following secondary market bid rates for the issue of treasury bills with a remaining maturity closest to the specified index maturity: the rates bid as of approximately 3:30 P.M., New York City time, on the relevant treasury interest determination date, by three primary U.S. government securities dealers in New York City selected by the calculation agent.
- If fewer than three dealers selected by the calculation agent are quoting as described in the prior paragraph, the treasury rate in effect for the new interest period will be the treasury rate in effect for the prior interest period. If the initial interest rate has been in effect for the prior interest period, however, it will remain in effect for the new interest period.

CMT Rate Notes

If you purchase a CMT rate note, your note will bear interest at an interest rate equal to the CMT rate and adjusted by the spread or spread multiplier, if any, indicated in your pricing supplement.

The CMT rate will be the following rate as published in H.15(519) opposite the heading “Treasury constant maturities,” as that rate is displayed on the *designated CMT Reuters page* under the heading “. . . Treasury Constant Maturities”, under the column for the *designated CMT index maturity*:

- if the designated CMT Reuters page is Reuters page FRBCMT, the rate for the relevant interest determination date; or
- if the designated CMT Reuters page is Reuters page FEDCMT, the weekly or monthly average, as specified in your pricing supplement, for the week that ends immediately before the week in which the relevant interest determination date falls, or for the month that ends immediately before the month in which the relevant interest determination date falls, as applicable.

If the CMT rate cannot be determined in this manner, the following procedures will apply:

- If the applicable rate described above is not displayed on the relevant designated CMT Reuters page at 3:00 P.M., New York City time, on the relevant interest determination date, unless the calculation is made earlier and the rate is available from that source at that time, then the CMT rate will be the applicable treasury constant maturity rate described above—*i.e.*, for the designated CMT index maturity and for either the relevant interest determination date or the weekly or monthly average, as applicable—as published in H.15(519) opposite the caption “Treasury constant maturities”.
- If the designated CMT Reuters page is FRBCMT and the applicable rate described above does not appear in H.15(519) by 3:00 P.M., New York City time, on the relevant interest determination date, unless the calculation is made earlier and the rate is available from one of those sources at that time, then the CMT rate will be the treasury constant maturity rate for the designated CMT index maturity and with reference to the relevant interest determination date, that:
 - is published by the Board of Governors of the Federal Reserve System, or the U.S. Department of the Treasury; and
 - is determined by the calculation agent to be comparable to the rate that would otherwise have been published in H.15(519).
- If the designated CMT Reuters page is FEDCMT and the applicable rate described above does not appear in H.15(519) by 3:00 P.M., New York City time, on the relevant interest determination date, unless the calculation is made earlier and the rate is available from that source at that time, the CMT rate will be the treasury constant maturity rate for the one-week or one-month rate, as applicable, for the designated CMT index maturity and with reference to the relevant interest determination date, that is otherwise announced by the Federal Reserve Bank of New York for the week or month, as applicable, immediately preceding that interest determination date.
- If the designated CMT Reuters page is FRBCMT the rate described in the second preceding paragraph does not appear by 3:00 P.M., New York City time, on the relevant interest determination date, unless the calculation is made earlier and the rate is available from one of those sources at that time, then the CMT rate will be the yield to maturity of the arithmetic mean of the following secondary market bid rates for the most recently issued treasury notes having an original maturity equal to the designated CMT index maturity and a remaining term to maturity of not less than the designated CMT index maturity minus one year, and in a representative amount: the bid rates, as of approximately 3:30 P.M., New York City time, on the relevant interest determination date, of three primary U.S. government securities dealers in New York City selected by the calculation agent. In selecting these bid rates, the calculation agent will request quotations from five of these primary dealers and will disregard the highest quotation—or, if there is equality, one of the highest—and the lowest quotation—or, if there is equality, one of the lowest. If fewer than five but more than two such offered rates are provided, the CMT rate will be based on the arithmetic mean of the bid prices provided, and neither the highest nor

lowest of such quotations will be eliminated. Treasury notes are direct, non-callable, fixed rate obligations of the U.S. government.

- If the designated CMT Reuters screen page is FEDCMT and the Federal Reserve Bank of New York does not publish a one-week or one-month rate, as applicable, for U.S. Treasury securities on the relevant interest determination date, unless the calculation is made earlier and the rate is available from one of those sources at that time, then the CMT rate will be the yield to maturity of the arithmetic mean of the following secondary market offered rates for the most recently issued treasury notes having an original maturity of approximately the designated CMT index maturity and a remaining term to maturity of not less than the designated CMT index maturity minus one year, and in a representative amount: the offered rates, as of approximately 3:30 P.M., New York City time, on the relevant interest determination date, of three primary U.S. government securities dealers in New York City selected by the calculation agent. In selecting these offered rates, the calculation agent will request quotations from five of these primary dealers and will disregard the highest quotation — or, if there is equality, one of the highest — and the lowest quotation — or, if there is equality, one of the lowest. If fewer than five but more than two such offered rates are provided, the CMT rate will be based on the arithmetic mean of the bid prices provided, and neither the highest nor lowest of such quotations will be eliminated.
- If the calculation agent is unable to obtain three quotations of the kind described in the prior two paragraphs, the CMT rate will be the yield to maturity of the arithmetic mean of the following secondary market bid rates for treasury notes with an original maturity longer than the designated CMT index maturity, with a remaining term to maturity closest to the designated CMT index maturity and in a representative amount: the bid rates, as of approximately 3:30 P.M., New York City time, on the relevant interest determination date, of three primary U.S. government securities dealers in New York City selected by the calculation agent. In selecting these bid rates, the calculation agent will request quotations from five of these primary dealers and will disregard the highest quotation (or, if there is equality, one of the highest) and the lowest quotation (or, if there is equality, one of the lowest).
- If fewer than five but more than two of these primary dealers are quoting as described in the prior paragraph, then the CMT rate for the relevant interest determination date will be based on the arithmetic mean of the bid rates so obtained, and neither the highest nor the lowest of those quotations will be disregarded. If two treasury notes with an original maturity longer than the designated CMT index maturity have remaining terms to maturity that are equally close to the designated CMT index maturity, the calculation agent will obtain quotations for the treasury note with the shorter remaining term to maturity.
- If two or fewer primary dealers selected by the calculation agent are quoting as described above, the CMT rate in effect for the new interest period will be the CMT rate in effect for the prior interest period. If the initial interest rate has been in effect for the prior interest period, however, it will remain in effect for the new interest period.

CMS Rate Notes

If you purchase a CMS rate note, your note will bear interest at an interest rate equal to the CMS rate and adjusted by the spread or spread multiplier, if any, indicated in your pricing supplement.

The CMS rate will be the rate for U.S. dollar swaps with a maturity for a specified number of years, expressed as a percentage in the relevant pricing supplement, which appears on the **Reuters page ISDAFIX1** as of 11:00 a.m., New York City time, on the interest rate determination date.

- If the applicable rate described above does not appear by 11:00 a.m., New York City time, on the interest determination date, then the CMS rate will be a percentage determined on the basis of the mid-market, semi-annual swap rate quotations provided by five leading swap dealers in the New York City

interbank market at approximately 11:00 a.m., New York City time, on the interest determination date. For this purpose, the semi-annual swap rate means the mean of the bid and offered rates for the semi-annual fixed leg, calculated on a 30/360 day count basis, of a fixed-for-floating U.S. dollar interest rate swap transaction with a term equal to the index maturity designated in the relevant pricing supplement commencing on the reset date and in a representative amount with an acknowledged dealer of good credit in the swap market, where the floating leg, calculated on an Actual/360 day count basis, as such rate may be determined in accordance with the provisions set forth below under “— LIBOR Notes” with an index maturity of three months. The calculation agent will select the five swap dealers after consultation with us and will request the principal New York City office of each of those dealers to provide a quotation of its rate. If at least three quotations are provided, the CMS rate for that interest determination date will be the arithmetic mean of the quotations, eliminating the highest and lowest quotations or, in the event of equality, one of the highest and one of the lowest quotations.

- If fewer than three leading swap dealers selected by the calculation agent are quoting as described above, the CMS rate will remain the CMS rate in effect on that interest rate determination date or, if that interest rate determination date is the first reference rate determination date, the initial interest rate.

Federal Funds Rate Notes

If you purchase a federal funds rate note, your note will bear interest at an interest rate equal to the federal funds rate and adjusted by the spread or spread multiplier, if any, indicated in your pricing supplement.

The federal funds rate will be the rate for U.S. dollar federal funds as of the relevant interest determination date, as published in H.15(519) under the heading “Federal Funds (effective)”, as that rate is displayed on **Reuters page FEDFUNDS1** under the heading “EFFECT”. If the federal funds rate cannot be determined in this manner, the following procedures will apply:

- If the rate described above is not displayed on Reuters page FEDFUNDS1 by 3:00 P.M., New York City time, on the relevant interest calculation date, unless the calculation is made earlier and the rate is available from that source at that time, then the federal funds rate, as of the relevant interest determination date, will be the rate described above as published in H.15 daily update, or another recognized electronic source used for displaying that rate, under the heading “Federal Funds (Effective).”
- If the rate described above is not displayed on Reuters page FEDFUNDS1 and does not appear in H.15(519), H.15 daily update or another recognized electronic source by 3:00 P.M., New York City time, on the relevant interest calculation date, unless the calculation is made earlier and the rate is available from one of those sources at that time, the federal funds rate will be the arithmetic mean of the rates for the last transaction in overnight, U.S. dollar federal funds arranged, before 9:00 A.M., New York City time, on the business day following the relevant interest determination date, by three leading brokers of U.S. dollar federal funds transactions in New York City selected by the calculation agent.
- If fewer than three brokers selected by the calculation agent are quoting as described above, the federal funds rate in effect for the new interest period will be the federal funds rate in effect for the prior interest period. If the initial interest rate has been in effect for the prior interest period, however, it will remain in effect for the new interest period.

Special Rate Calculation Terms

In this subsection entitled “—Interest Rates”, we use several terms that have special meanings relevant to calculating floating interest rates. We define these terms as follows:

- The term “bond equivalent yield” means a yield expressed as a percentage and calculated in accordance with the following formula:

$$\text{bond equivalent yield} = \frac{D \times N}{360 - (D \times M)} \times 100$$

where

“D” means the annual rate for treasury bills quoted on a bank discount basis and expressed as a decimal;

“N” means 365 or 366, as the case may be; and

“M” means the actual number of days in the applicable interest reset period.

The term “business day” means, for any note, a day that meets all the following applicable requirements:

- for all notes, is a Monday, Tuesday, Wednesday, Thursday or Friday that is neither a legal holiday nor a day on which banking institutions are authorized or required by law to close in New York City or Toronto, and, in the case of a floating rate note, London;
- if the note has a specified currency other than U.S. dollars or euros, is also a day on which banking institutions are not authorized or obligated by law, regulation or executive order to close in the applicable principal financial center; and
- if the note is a EURIBOR note or has a specified currency of euros, or is a LIBOR note for which the index currency is euros, is also a euro business day.

The term “designated CMT index maturity” means the index maturity for a CMT rate note and will be the original period to maturity of a U.S. treasury security—either 1, 2, 3, 5, 7, 10, 20 or 30 years—specified in the applicable pricing supplement.

The term “designated CMT Reuters page” means the Reuters page mentioned in the relevant pricing supplement that displays treasury constant maturities as reported in H.15(519). If no Reuters page is so specified, then the applicable page will be Reuters page FEDCMT. If Reuters page FEDCMT applies but the relevant pricing supplement does not specify whether the weekly or monthly average applies, the weekly average will apply.

The term “euro business day” means any day on which the Trans-European Automated Real-Time Gross Settlement Express Transfer (TARGET2) System, or any successor system, is open for business.

The term “euro-zone” means, at any time, the region comprised of the member states of the European Economic and Monetary Union that, as of that time, have adopted a single currency in accordance with the Treaty on European Union of February 1992.

“H.15(519)” means the weekly statistical release entitled “Statistical Release H.15(519)”, or any successor publication, published by the Board of Governors of the Federal Reserve System.

“H.15 daily update” means the daily update of H.15(519) available through the worldwide website of the Board of Governors of the Federal Reserve System, at <http://www.federalreserve.gov/releases/h15/update>, or any successor site or publication.

The term “index currency” means, with respect to a LIBOR note, the currency specified as such in the relevant pricing supplement. The index currency may be U.S. dollars or any other currency, and will be U.S. dollars unless another currency is specified in the relevant pricing supplement.

The term “index maturity” means, with respect to a floating rate note, the period to maturity of the instrument or obligation on which the interest rate formula is based, as specified in the applicable pricing supplement.

“London business day” means any day on which dealings in the relevant index currency are transacted in the London interbank market.

- The term “money market yield” means a yield expressed as a percentage and calculated in accordance with the following formula:

$$\text{money market yield} = \frac{D \times 360}{360 - (D \times M)} \times 100$$

where

“D” means the annual rate for commercial paper quoted on a bank discount basis and expressed as a decimal; and

“M” means the actual number of days in the relevant interest reset period.

The term “principal financial center” means the capital city of the country to which an index currency relates (or the capital city of the country issuing the specified currency, as applicable), except that with respect to U.S. dollars, Australian dollars, Canadian dollars, South African rands and Swiss francs, the “principal financial center” means The City of New York, Sydney, Toronto, Johannesburg and Zurich, respectively, and with respect to euros the principal financial center means London.

The term “representative amount” means an amount that, in the calculation agent’s judgment, is representative of a single transaction in the relevant market at the relevant time.

“Reuters screen LIBOR Page” means the display on the Reuters screen LIBOR01 page or LIBOR02 page, as specified in applicable pricing supplement, on the Reuters 3000 Xtra service (or any successor service) (or any replacement page or pages on the Reuters 3000 Xtra service or any successor service on which London interbank rates of major banks for the relevant index currency are displayed).

“Reuters screen US PRIME 1 page” means the display on the “US PRIME 1” page on the Reuters 3000 Xtra service, or any successor service, or any replacement page or pages on that service, for the purpose of displaying prime rates or base lending rates of major U.S. banks.

“Reuters page” means the display on the Reuters 3000 Xtra service, or any successor service, on the page or pages specified in this prospectus supplement or the relevant pricing supplement, or any replacement page or pages on that service.

If, when we use the terms designated CMT Reuters page, H.15(519), H.15 daily update, Reuters screen US PRIME 1 page, Reuters screen LIBOR Page or Reuters page, we refer to a particular heading or headings on any of those pages, those references include any successor or replacement heading or headings as determined by the calculation agent.

Other Provisions; Addenda

Any provisions relating to the notes, including the determination of the interest rate basis, calculation of the interest rate applicable to a floating rate note, its interest payment dates, any redemption or repayment provisions, or any other term relating thereto, may be modified and/or supplemented by the terms as specified under “Other Provisions” on the face of the applicable notes or in an Addendum relating to the applicable notes, if so specified on the face of the applicable notes, and, in each case, in the relevant pricing supplement.

CERTAIN INCOME TAX CONSEQUENCES

United States Taxation

For a general overview of the tax consequences of owning debt securities that we offer, please see the discussion in the accompanying prospectus under “Tax Consequences—United States Taxation.”

However, the tax consequences of any particular note depends on its terms, and the tax treatment of each note will be described in the applicable pricing supplement. Consequently, except to the extent the pricing supplement indicates otherwise, you should not rely on the general overview of tax consequences in the accompanying prospectus in deciding whether to invest in any note. Moreover, in all cases, you should consult with your own tax advisor concerning the consequences of investing in and holding any particular note you propose to purchase.

Canadian Taxation

In the opinion of our Canadian tax counsel, Norton Rose Fulbright Canada LLP, the following summary describes, as of the date hereof, the principal Canadian federal income tax consequences under the Income Tax Act (Canada) (the “Tax Act”), generally applicable to an initial purchaser of notes who acquires notes pursuant to this offering, and who, at all relevant times and for the purposes of the Tax Act: (i) deals at arm’s length and is not affiliated with the Bank, and (ii) acquires and holds the notes as capital property and is entitled to receive all payments of interest and principal under the notes (a “noteholder”). Generally, the notes will constitute capital property to a noteholder provided that the noteholder does not hold the notes in the course of carrying on a business of buying and selling securities and does not acquire them as part of an adventure or concern in the nature of trade.

This summary is not applicable to a noteholder: (i) that is a “financial institution” as defined in the Tax Act for purposes of the “mark-to-market” rules; (ii) an interest in which is a “tax shelter investment” as defined in the Tax Act; (iii) that is a “specified financial institution” (as defined in the Tax Act); (iv) that has elected to report its “Canadian tax results” in a currency other than the Canadian currency, or (v) that has entered or will enter into, with respect to the notes, a “derivative forward agreement” as that term is defined in the Tax Act. Such noteholders should consult their own tax advisors.

This summary is based upon the current provisions of the Tax Act and the regulations thereunder (the “Regulations”), all specific proposals to amend the Tax Act or such Regulations publicly announced by the federal Minister of Finance (Canada) prior to the date hereof (the “Proposals”) and our understanding of the current administrative policies and assessing practices of the Canada Revenue Agency (“CRA”) published in writing by it. This summary assumes that the Proposals will be enacted as currently proposed, but no assurance can be given that this will be the case. This summary is not exhaustive of all possible Canadian federal income tax considerations and, except for the Proposals, this summary does not take into account or anticipate any changes in the law or the administrative policies or assessing practices of the CRA, whether by judicial, regulatory, governmental or legislative action, nor does it take into account tax laws of any province or territory of Canada, or of any jurisdiction outside Canada.

This summary is of a general nature only and is not intended to be, nor should it be construed to be, legal or tax advice to any particular noteholder. Accordingly, prospective noteholders should consult their own tax advisors with respect to their particular circumstances. In addition, the tax consequences relevant to the holding or disposition of any particular note depends on its terms. To the extent such tax consequences are materially different than those described herein, the tax treatment of such particular note will be described in the applicable pricing supplement. You should consult with your own tax advisor concerning the consequences of investing in and holding any particular note you propose to purchase.

Currency

All amounts relating to the acquisition, holding or disposition of the notes must be converted into Canadian dollars based on the relevant exchange rate quoted by the Bank of Canada at noon on the relevant day or

such other rate or rates of exchange acceptable to the Ministry of Finance (Canada). A noteholder may realize a capital gain or capital loss by virtue of exchange rate fluctuations. The amount of interest required to be included in computing the noteholder's income for a taxation year will also be affected by fluctuations in the relevant exchange rate.

Noteholders Not Resident in Canada

An investor who is a Non-resident Holder should read carefully the description of material Canadian federal income tax considerations relevant to a Non-resident Holder owning debt securities under "Tax Consequences—Canadian Taxation" in the accompanying prospectus.

Noteholders Resident in Canada

The following discussion applies to a noteholder who, at all relevant times, for the purposes of the Tax Act and any applicable income tax treaty or convention, is or is deemed to be resident in Canada (a "Resident Holder").

Certain Resident Holders who might not otherwise be considered to hold their notes as capital property may, in certain circumstances, be entitled to have the notes, and all other "Canadian securities" (as defined in the Tax Act) owned by such Resident Holders, treated as capital property by making the irrevocable election permitted by subsection 39(4) of the Tax Act.

Interest

A Resident Holder that is a corporation, partnership, unit trust or a trust of which a corporation or partnership is a beneficiary will be required to include in computing its income for a taxation year the entire amount of any interest (or amount considered to be interest) on the notes that accrues or is deemed to accrue to it to the end of that taxation year or becomes receivable or is received by it before the end of that taxation year, to the extent that such amount was not included in computing the Resident Holder's income for a preceding taxation year.

Any other Resident Holder, including an individual (other than a trust described in the preceding paragraph), will be required to include in computing its income for a taxation year the amount of any interest (or amount considered to be interest) on the notes that is received or receivable by such Resident Holder in that year (depending on the method regularly followed by the Resident Holder in computing its income) to the extent that such amount was not included in computing the Resident Holder's income for a preceding taxation year. In addition, if at any time a note becomes an "investment contract" (as defined in the Tax Act) in relation to the Resident Holder, such Resident Holder will be required to include in computing income for a taxation year any interest that accrues to the Resident Holder on the note up to any "anniversary date" (as defined in the Tax Act) in that year to the extent such interest was not otherwise included in the Resident Holder's income for that or a preceding taxation year.

Redemption or other Disposition of Notes

On a disposition or a deemed disposition of a note (including a redemption or a repayment at maturity), a Resident Holder will generally be required to include in computing its income for the taxation year in which the disposition or deemed disposition occurs all interest (or amount considered to be interest) that accrued or is deemed to accrue on the note from the date of the last interest payment to the date of disposition or deemed disposition, except to the extent that such interest has otherwise been included in the Resident Holder's income for that or a preceding taxation year.

A Resident Holder who disposes or is deemed to have disposed of a note (including on maturity of the notes or pursuant to a redemption or other acquisition by us) should realize a capital gain (or a capital loss) to the extent that the proceeds of disposition, net of amounts included in income as interest and any reasonable costs of disposition, exceed (or are less than) the Resident Holder's adjusted cost base of the notes. Resident Holders who dispose of notes prior to the maturity date thereof, particularly those who dispose of notes shortly prior to the maturity date thereof, should consult their own tax advisors with respect to their particular circumstances.

Treatment of Capital Gains and Losses

One-half of any capital gain realized will constitute a taxable capital gain that must be included in the calculation of the Resident Holder's income. One-half of any capital loss incurred will constitute an allowable capital loss that is deductible against taxable capital gains of the Resident Holder, subject to and in accordance with the provisions of the Tax Act. Capital gains realized by an individual, including most trusts, may give rise to alternative minimum tax under the Tax Act.

Additional Refundable Tax

A Resident Holder that is a "Canadian-controlled private corporation" (as defined in the Tax Act) may be subject to an additional refundable tax on investment income, including interest and taxable capital gains.

SUPPLEMENTAL PLAN OF DISTRIBUTION

We and RBC Capital Markets, LLC, Barclays Capital Inc., Citigroup Global Markets Inc., Credit Suisse Securities (USA) LLC, Deutsche Bank Securities Inc., Goldman, Sachs & Co., Incapital LLC, J.P. Morgan Securities LLC, Merrill Lynch, Pierce, Fenner & Smith Incorporated, Morgan Stanley & Co. LLC, UBS Financial Services Inc., UBS Securities LLC and Wells Fargo Securities, LLC, as agents, have entered into a distribution agreement with respect to the notes. The agent or agents through whom the notes will be offered will be identified in the applicable pricing supplement. Subject to certain conditions, the agents have agreed to use their reasonable efforts to solicit purchases of the notes. We have the right to accept offers to purchase notes and may reject any proposed purchase of the notes. The agents may also reject any offer to purchase notes. We will pay the agents a commission on any notes sold through the agents. The commission is expected to range from 0% to 0.5% of the principal amount of the notes, depending on the stated maturity of the notes, for fixed rate and floating rate notes. The commission is expected to range from 1% to 5% of the principal amount of the notes for indexed and other structured notes, or in such other amount as may be agreed between the agents and Royal Bank of Canada.

We may also sell notes to the agents, who will purchase the notes as principal for their own accounts. In that case, the agent will purchase the notes at a price equal to the issue price specified in the applicable pricing supplement, less a discount to be agreed with us at the time of the offering.

The agents may resell any notes they purchase as principal to other brokers or dealers at a discount, which may include all or part of the discount the agents received from us. If all the notes are not sold at the initial offering price, the agents may change the offering price and the other selling terms.

We may also sell notes directly to investors. We will not pay commissions on notes we sell directly.

We have reserved the right to withdraw, cancel or modify the offer made by this prospectus supplement without notice and may reject orders in whole or in part whether placed directly with us or with an agent. No termination date has been established for the offering of the notes.

The agents, whether acting as agent or principal, may be deemed to be “underwriters” within the meaning of the Securities Act of 1933, as amended (the “Securities Act”). We have agreed to indemnify the agents against certain liabilities, including liabilities under the Securities Act, or to contribute to payments made in respect of those liabilities.

If the agents sell notes to dealers who resell to investors and the agents pay the dealers all or part of the discount or commission they receive from us, those dealers may also be deemed to be “underwriters” within the meaning of the Securities Act.

Unless otherwise indicated in any pricing supplement, payment of the purchase price of notes, other than notes denominated in a non-U.S. dollar currency, will be required to be made in funds immediately available in The City of New York. The notes will be the Same Day Funds Settlement System at DTC and, to the extent the secondary market trading in the notes is effected through the facilities of such depositary, such trades will be settled in immediately available funds.

We may appoint additional agents with respect to the notes. Any other agents will be named in the applicable pricing supplements and those agents will enter into the distribution agreement referred to above. The agents referred to above and any additional agents may engage in commercial banking and investment banking and other transactions with and perform services for Royal Bank of Canada and our affiliates in the ordinary course of business. RBC Capital Markets, LLC is an affiliate of the Royal Bank of Canada and may resell notes to or through another of our affiliates, as selling agent.

The notes are a new issue of securities, and there will be no established trading market for any note before its original issue date. We do not plan to list the notes on a securities exchange or quotation system. We have been advised by each of the agents named above that they may make a market in the notes offered through them. However, neither RBC Capital Markets, LLC nor any of our other affiliates nor any other agent named in your

pricing supplement that makes a market is obligated to do so, and any of them may stop doing so at any time without notice. No assurance can be given as to the liquidity or trading market for the notes.

This prospectus supplement may be used by RBC Capital Markets, LLC and any other agent in connection with offers and sales of the notes in market-making transactions. In a market-making transaction, an agent or other person resells a note it acquires from other holders after the original offering and sale of the note. Resales of this kind may occur in the open market or may be privately negotiated, at prevailing market prices at the time of resale or at related or negotiated prices. In these transactions, such agent may act as principal or agent, including as agent for the counterparty in a transaction in which RBC Capital Markets, LLC or another agent acts as principal, or as agent for both counterparties in a transaction in which RBC Capital Markets, LLC does not act as principal. The agents may receive compensation in the form of discounts and commissions, including from both counterparties in some cases. Other affiliates of Royal Bank of Canada (in addition to RBC Capital Markets, LLC) and the Bank may also engage in transactions of this kind and may use this prospectus supplement for this purpose. The Bank and any of its affiliates may engage in market-making transactions only in those jurisdictions in which it has all necessary governmental and regulatory authorizations for such activity.

The aggregate initial offering price specified on the cover of this prospectus supplement relates to the initial offering of new notes we may issue on and after the date of this prospectus supplement. This amount does not include notes that may be resold in market-making transactions. The latter includes notes that we may issue going forward as well as notes we have previously issued.

Royal Bank of Canada does not expect to receive any proceeds from market-making transactions, except to the extent it is entitled to proceeds of its own sales of notes in such transactions. Royal Bank of Canada does not expect that any agent that engages in these transactions will pay any proceeds from its market-making resales to Royal Bank of Canada.

Information about the trade and settlement dates, as well as the purchase price, for a market-making transaction will be provided to the purchaser in a separate confirmation of sale.

Unless Royal Bank of Canada or an agent informs you in your confirmation of sale that your note is being purchased in its original offering and sale, you may assume that you are purchasing your note in a market-making transaction.

In this prospectus supplement, the term “this offering” means the initial offering of the notes made in connection with their original issuance. This term does not refer to any subsequent resales of notes in market-making transactions.

The agents may engage in over-allotment, stabilizing transactions, syndicate covering transactions and penalty bids in accordance with Regulation M under the Exchange Act. Over-allotment involves syndicate sales in excess of the offering size, which creates a syndicate short position. Stabilizing transactions permit bids to purchase the underlying security so long as the stabilizing bids do not exceed a specified maximum. Syndicate covering transactions involve purchases of the notes in the open market after the distribution has been completed in order to cover syndicate short positions. Penalty bids permit reclaiming a selling concession from a syndicate member when the notes originally sold by such syndicate member are purchased in a syndicate covering transaction to cover syndicate short positions. Such stabilizing transactions, syndicate covering transactions and penalty bids may stabilize, maintain or otherwise affect the market price of the notes, which may be higher than it would otherwise be in the absence of such transactions. The agents are not required to engage in these activities, and may end any of these activities at any time.

In addition to offering notes through the agents as discussed above, other medium-term notes that have terms substantially similar to the terms of the notes offered by this prospectus supplement may in the future be offered, concurrently with the offering of the notes, on a continuing basis by Royal Bank of Canada. Any of these notes sold pursuant to the distribution agreement or sold by Royal Bank of Canada directly to investors will reduce the aggregate amount of notes which may be offered by this prospectus supplement.

DOCUMENTS FILED AS PART OF THE REGISTRATION STATEMENT

In addition to the documents specified in the accompanying prospectus under “Documents Incorporated by Reference,” the following documents were filed with the Securities and Exchange Commission and incorporated by reference as part of the registration statement to which this prospectus supplement relates (the “Registration Statement”): (i) the Distribution Agreement, dated April 30, 2015, between us and the agents, (ii) Amendment No. 1 to the Distribution Agreement, dated January 8, 2016, between us and the agents, (iii) the Amended and Restated Calculation Agency Agreement, dated as of January 8, 2016, between us and RBC Capital Markets, LLC, and (iii) the Amended and Restated Exchange Rate Agency Agreement, dated as of January 8, 2016, between us and RBC Capital Markets, LLC. Such documents will not be incorporated by reference into this prospectus supplement or the accompanying prospectus. Additional exhibits to the Registration Statement to which this prospectus supplement relates may be subsequently filed in reports on Form 40-F or on Form 6-K that specifically state that such materials are incorporated by reference as exhibits in Part II of the Registration Statement.



ROYAL BANK OF CANADA

Senior Debt Securities

Subordinated Debt Securities

Common Shares

up to an aggregate initial offering price of U.S. \$40 billion or the equivalent thereof in other currencies.

This prospectus describes some of the general terms that may apply to these securities and the general manner in which they may be offered. We will give you the specific prices and other terms of the securities we are offering in supplements to this prospectus. You should read this prospectus and the applicable supplement carefully before you invest. We may sell the securities to or through one or more underwriters, dealers or agents. The names of the underwriters, dealers or agents will be set forth in supplements to this prospectus.

NEITHER THE SECURITIES AND EXCHANGE COMMISSION NOR ANY STATE SECURITIES COMMISSION HAS APPROVED OR DISAPPROVED OF THESE SECURITIES OR DETERMINED THAT THIS PROSPECTUS IS TRUTHFUL OR COMPLETE. ANY REPRESENTATION TO THE CONTRARY IS A CRIMINAL OFFENSE.

Prospective investors should be aware that the acquisition of the securities described herein may have tax consequences both in the United States and in Canada. Such consequences for investors who are resident in, or citizens of, the United States may not be described fully herein or in any applicable prospectus supplement.

The enforcement by investors of civil liabilities under United States federal securities laws may be affected adversely by the fact that Royal Bank of Canada is a Canadian bank, that many of its officers and directors are residents of Canada, that some or all of the underwriters or experts named in the Registration Statement may reside outside of the United States, and that all or a substantial portion of the assets of Royal Bank of Canada and said persons may be located outside the United States.

Our common shares trade under the symbol “RY” on the Toronto Stock Exchange and the New York Stock Exchange. The common shares may be offered pursuant to this prospectus solely in connection with an offering of subordinated debt securities that provide for the full and permanent conversion of such securities into common shares of Royal Bank of Canada upon the occurrence of certain trigger events relating to financial viability, as further described herein.

The securities described herein will not constitute deposits that are insured under the Canada Deposit Insurance Corporation Act or by the United States Federal Deposit Insurance Corporation.

Investing in the securities described herein involves a number of risks. See “Risk Factors” on page 1 of this prospectus.

TM Trademark of Royal Bank of Canada

The date of this prospectus is January 8, 2016.

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In this prospectus, unless the context otherwise indicates, the “Bank”, “we”, “us” or “our” means Royal Bank of Canada and its subsidiaries. All dollar amounts referred to in this prospectus are in Canadian dollars unless otherwise specifically expressed. In this prospectus and any prospectus supplement, currency amounts are stated in Canadian dollars (“\$”), unless specified otherwise.

DOCUMENTS INCORPORATED BY REFERENCE

The Securities and Exchange Commission (the “SEC”) allows us to “incorporate by reference” the information we file with it, which means we can disclose important information to you by referring you to those documents. Copies of the documents incorporated herein by reference may be obtained upon written or oral request without charge from the Director, Investor Relations, Royal Bank of Canada at 200 Bay Street, 4th Floor, North Tower, Toronto, Ontario, Canada M5J 2W7 (telephone: (416) 955-7802). The documents incorporated by reference are available over the Internet at www.sec.gov.

We incorporate by reference our Annual Report on Form 40-F for the fiscal year ended October 31, 2015 (the “2015 Annual Report”). In addition, we will incorporate by reference into this prospectus all documents that we file under Section 13(a), 13(c), 14 or 15(d) of the United States Securities Exchange Act of 1934, as amended (the “Exchange Act”) and, to the extent, if any, we designate therein, reports on Form 6-K we furnish to the SEC after the date of this prospectus and prior to the termination of any offering contemplated in this prospectus.

Any statement contained in this prospectus or in a document incorporated or deemed to be incorporated by reference herein shall be deemed to be modified or superseded, for purposes of this prospectus, to the extent that a statement contained herein or in any other subsequently-filed or furnished document that also is or is deemed to be incorporated by reference herein modifies or supersedes such statement. The modifying or superseding statement need not state that it has modified or superseded a prior statement or include any other information set forth in the document that it modifies or supersedes. The making of a modifying or superseding statement shall not be deemed an admission for any purposes that the modified or superseded statement, when made, constituted a misrepresentation, an untrue statement of a material fact or an omission to state a material fact that is required to be stated or that is necessary to make a statement not misleading in light of the circumstances in which it was made.

Any statement so modified or superseded shall not be deemed, except as so modified or superseded, to constitute a part of this prospectus.

Upon a new Annual Report and the related annual financial statements being filed by us with, and, where required, accepted by, the SEC, the previous Annual Report shall be deemed no longer to be incorporated by reference into this prospectus for purposes of future offers and sales of securities hereunder.

All documents incorporated by reference, or to be incorporated by reference, have been filed with or furnished to, or will be filed with or furnished to, the SEC.

WHERE YOU CAN FIND MORE INFORMATION

In addition to our continuous disclosure obligations under the securities laws of the Provinces and Territories of Canada, we are subject to the information reporting requirements of the Exchange Act and in accordance therewith file reports and other information with the SEC. As the Bank is a “foreign private issuer” under the rules adopted under the Exchange Act, we are exempt from certain of the requirements of the Exchange Act, including the proxy and information provisions of Section 14 of the Exchange Act and the reporting and liability provisions applicable to officers, directors and significant shareholders under Section 16 of the Exchange Act. Under the multijurisdictional disclosure system adopted by the United States, reports and other information filed with the SEC may be prepared in accordance with the disclosure requirements of Canada, which requirements are different from those of the United States. Such reports and other information, when filed by us in accordance with such requirements, can be inspected and copied by you at the SEC’s Public Reference Room located at 100 F Street, N.E., Washington, D.C. 20549. The public may obtain information on the operation of the Public Reference Room by calling the SEC at 1-800-SEC-0330. Our SEC filings are also available to the public over the Internet at the SEC’s website at www.sec.gov. Our common shares are listed on the New York Stock Exchange, and reports and other information concerning us can be inspected at the offices of the New York Stock Exchange, 11 Wall Street, New York, New York 10005. Information about us can be located at our website at www.rbc.com. All Internet references in this prospectus are inactive textual references and we do not incorporate website contents into this prospectus.

FURTHER INFORMATION

We have filed with the SEC a Registration Statement on Form F-3 under the United States Securities Act of 1933, as amended (the “Securities Act”), with respect to the securities offered with this prospectus. This prospectus is a part of that Registration Statement, and it does not contain all of the information set forth in the Registration Statement. You can access the Registration Statement together with its exhibits at the SEC’s website at www.sec.gov or inspect these documents at the offices of the SEC in order to obtain more information about us and about the securities offered with this prospectus.

ABOUT THIS PROSPECTUS

This prospectus provides you with a general description of the securities we may offer. Each time we sell securities, we will provide a prospectus supplement containing specific information about the terms of the securities being offered. A prospectus supplement may include a discussion of any risk factors or other special considerations applicable to those securities or to us. A prospectus supplement may also add, update or change information in this prospectus. If there is any inconsistency between the information in this prospectus and the applicable prospectus supplement, you should rely on the information in the prospectus supplement. You should read both this prospectus and any applicable prospectus supplement together with additional information described under the heading “Where You Can Find More Information” above.

We may sell securities to underwriters who will sell the securities to the public on terms fixed at the time of sale. In addition, the securities may be sold by us directly or through dealers or agents designated from time to time. If we, directly or through agents, solicit offers to purchase the securities, we reserve the sole right to accept and, together with any agents, to reject, in whole or in part, any of those offers.

Any prospectus supplement will contain the names of the underwriters, dealers or agents, if any, together with the terms of the offering, the compensation of those underwriters and the net proceeds to us. Any underwriters, dealers or agents participating in the offering may be deemed “underwriters” within the meaning of the Securities Act.

We publish our consolidated financial statements in Canadian dollars. As indicated in the table below, the Canadian dollar has fluctuated in value compared to the U.S. dollar over the last five years.

The tables below set forth the rate at each period end, the average yearly rate and the low and high daily noon buying rates between Canadian dollars and U.S. dollars (in Canadian dollars per U.S. dollar) for the five-year period ended October 31, 2015 and the low and high daily noon buying rates for November 2015, December 2015 and January 1, 2016 through January 7, 2016. On January 7, 2016, the U.S. dollar noon buying rate was \$1.4061. Our reference to the “noon buying rate” is the noon exchange rate reported by the Bank of Canada on a specified date.

YEAR ENDED OCTOBER 31 (\$ per US\$)	AT PERIOD END	AVERAGE RATE¹	LOW	HIGH
2011	0.9935	0.9846	0.9449	1.0604
2012	0.9996	1.0034	0.9710	1.0487
2013	1.0429	1.0233	0.9839	1.0576
2014	1.1275	1.0934	1.0415	1.1289
2015	1.3083	1.2562	1.1236	1.3413
MONTH OF 2015 (\$ per US\$)			LOW	HIGH
NOVEMBER.....			1.3095	1.3360
DECEMBER			1.3360	1.3990
MONTH OF 2016 (\$ per US\$)			LOW	HIGH
JANUARY (through January 7, 2016).....			1.3969	1.4084

1 The average of the noon buying rates on the last business day of each full month during the relevant period.

RISK FACTORS

Investment in these securities is subject to various risks including those risks inherent in investing in an issuer involved in conducting the business of a diversified financial institution. Before deciding whether to invest in any securities, you should consider carefully the risks described in the documents incorporated by reference in this prospectus (including subsequently filed documents incorporated by reference) and, if applicable, those described in a prospectus supplement, as the case may be, relating to a specific offering of securities. You should consider the categories of risks identified and discussed in the “Risk management” and “Overview of other risks” sections of the Bank’s management’s discussion and analysis included in the 2015 Annual Report (the “2015 Management’s Discussion and Analysis”), including those summarized under “Caution Regarding Forward-Looking Statements” beginning on page 1 of this prospectus as well as any risks described in subsequently filed documents incorporated by reference.

ROYAL BANK OF CANADA

Business

Royal Bank of Canada and its subsidiaries operate under the master brand name of RBC. We are Canada’s largest bank, and one of the largest banks in the world, based on market capitalization. We are one of North America’s leading diversified financial services companies, and provide personal and commercial banking, wealth management, insurance, investor services and capital markets products and services on a global basis. We employ approximately 81,000 full- and part-time employees who serve more than 16 million personal, business, public sector and institutional clients through offices in Canada, the U.S. and 37 other countries.

Our segments are Personal & Commercial Banking, Wealth Management, Insurance, Investor & Treasury Services, Capital Markets and Corporate Support. Additional information about our business and each segment (including segment results) can be found under “Overview and outlook” beginning on page 10 and under “Business segment results” beginning on page 19 of the 2015 Management’s Discussion and Analysis, which is incorporated by reference in this prospectus.

Our common shares trade under the symbol “RY” on the Toronto Stock Exchange and the New York Stock Exchange. Additional information about RBC can be found on our website at www.rbc.com. Additional information about RBC and its subsidiaries is included in documents incorporated by reference into this document. For more information, see the section entitled “Where You Can Find More Information”.

We are a Schedule I bank under the *Bank Act* (Canada), which constitutes our charter. Our corporate headquarters are located at Royal Bank Plaza, 200 Bay Street, Toronto, Ontario, Canada M5J 2J5 and our head office is located at 1 Place Ville Marie, Montréal, Québec, Canada H3C 3A9.

PRESENTATION OF FINANCIAL INFORMATION

Pursuant to the decision made by the Canadian Accounting Standards Board, the Bank began preparing financial statements in accordance with International Financial Reporting Standards (“IFRS”) as issued by the International Accounting Standards Board on November 1, 2011. The financial information of the Bank incorporated by reference or otherwise contained in this prospectus has been prepared in accordance with IFRS. None of the financial information prepared in accordance with IFRS is comparable to the financial statements of companies using accounting principles generally accepted in the United States. For additional information about the Bank’s adoption of IFRS, refer to “Note 2 – Summary of significant accounting policies, estimates and judgments” and “Note 3 – First time adoption of IFRS” to the Bank’s audited consolidated financial statements for the year ended October 31, 2012 (the “2012 Audited Consolidated Financial Statements”) and, in respect of the impact on the Bank’s capital position, refer to “Note 32 – Capital management” to the 2012 Audited Consolidated Financial Statements.

CAUTION REGARDING FORWARD-LOOKING STATEMENTS

From time to time, we make written or oral forward-looking statements within the meaning of certain securities laws, including the “safe harbor” provisions of the *United States Private Securities Litigation Reform Act of 1995* and any applicable Canadian securities legislation. We may make forward-looking statements in this prospectus, in the documents incorporated by reference herein, in other filings with Canadian regulators or the SEC, in other reports to shareholders and in other communications. Forward-looking statements in this prospectus and the documents incorporated by reference herein include, but are not limited to, statements relating to our financial performance objectives, vision and strategic goals, the economic and market review and outlook for Canadian, U.S., European and global economies, the regulatory environment in which we operate, the outlook and priorities for each of our business segments and the risk environment including our liquidity and funding risk. The forward-looking information contained in this document and the documents incorporated by reference herein is presented for the purpose of assisting the holders of our securities and financial analysts in understanding our financial position and results of operations as at and for the periods ended on the dates presented and our financial performance objectives, vision and strategic goals, and may not be appropriate for other purposes. Forward-looking statements are typically identified by words such as “believe”, “expect”, “foresee”, “forecast”, “anticipate”, “intend”, “estimate”, “goal”, “plan” and “project” and similar expressions of future or conditional verbs such as “will”, “may”, “should”, “could” or “would”.

By their very nature, forward-looking statements require us to make assumptions and are subject to inherent risks and uncertainties, which give rise to the possibility that our predictions, forecasts, projections, expectations or conclusions will not prove to be accurate, that our assumptions may not be correct and that our financial performance objectives, vision and strategic goals will not be achieved. We caution readers not to place undue reliance on these statements as a number of risk factors could cause our actual results to differ materially from the expectations expressed in such forward-looking statements. These factors – many of which are beyond our control and the effects of which can be difficult to predict – include: credit, market, liquidity and funding, insurance, operational, regulatory compliance, strategic, reputation, legal and regulatory environment, competitive and systemic risks and other risks discussed in the Risk management and Overview of other risks sections of our 2015 Management’s Discussion and Analysis; weak oil and gas prices; the high levels of Canadian household debt; exposure to more volatile sectors; cybersecurity; anti-money laundering; the business and economic conditions in Canada, the U.S. and certain other countries in which we operate; the effects of changes in government fiscal, monetary and other policies; tax risk and transparency; and environmental risk.

We caution that the foregoing list of risk factors is not exhaustive and other factors could also adversely affect our results. When relying on our forward-looking statements to make decisions with respect to us, investors and others should carefully consider the foregoing factors and other uncertainties and potential events. Material economic assumptions underlying the forward-looking statements contained in this prospectus and the documents incorporated by reference herein are set out in the “Overview and outlook” section and for each business segment under the heading “Outlook and priorities” in our 2015 Management’s Discussion and Analysis. Except as required by law, we do not undertake to update any forward-looking statement, whether written or oral, that may be made from time to time by us or on our behalf.

Additional information about these and other factors can be found in the “Risk management” and “Overview of other risks” sections of our 2015 Management’s Discussion and Analysis and the other filings made by us with the SEC that are incorporated by reference in this prospectus.

Information contained in or otherwise accessible through the websites mentioned in this prospectus does not form part of this prospectus and is not incorporated herein by reference. All references in this prospectus to websites are inactive textual references and are for your information only.

USE OF PROCEEDS

Except as otherwise set forth in a prospectus supplement, the net proceeds from the sale of securities will be added to our general funds and will be used for general banking purposes. In addition, except as otherwise set forth in a prospectus supplement, the purpose of the sale of the subordinated debt securities will be to enlarge our capital base.

CONSOLIDATED RATIOS OF EARNINGS TO FIXED CHARGES

The table below sets forth the Bank's consolidated ratios of earnings to fixed charges, calculated in accordance with IFRS, for the fiscal years ended October 31, 2011, 2012, 2013, 2014 and 2015:

	Year Ended October 31,				
	2015	2014	2013⁽¹⁾	2012⁽¹⁾	2011
Excluding Interest on Deposits.....	6.14	6.23	5.34	4.88	3.47
Including Interest on Deposits.....	2.53	2.43	2.28	2.12	1.84

⁽¹⁾ Figures restated to reflect adoption of new accounting standards.

For purposes of computing these ratios, earnings represent net income plus income taxes and fixed charges (excluding capitalized interest). Fixed charges represent (i) estimated interest within rental expense, (ii) amortization of debt issuance costs and (iii) interest (including capitalized interest), including or excluding deposit interest as indicated.

CONSOLIDATED CAPITALIZATION AND INDEBTEDNESS

The following table sets forth our consolidated capitalization at October 31, 2015. This table should be read in conjunction with the Bank's audited consolidated financial statements for the year ended October 31, 2015 (the "2015 Audited Consolidated Financial Statements") and our 2015 Management's Discussion and Analysis, which are incorporated by reference in this prospectus.

	As at October 31, 2015
	(in millions of Canadian dollars)
Subordinated debentures⁽¹⁾	7,362
Equity attributable to shareholders	
Preferred shares	5,100
Common shares	14,573
Retained earnings	37,811
Treasury shares – preferred	(2)
Treasury shares – common	38
Other components of equity	4,626
Total Equity Attributable to Shareholders	62,146
Non-controlling interests	1,798
Total Equity	63,944
Total Capitalization	71,306

⁽¹⁾ For more information, refer to "Note 19 – Subordinated debentures" to the 2015 Annual Consolidated Financial Statements.

COMPARATIVE PER SHARE MARKET PRICE

The Bank's common shares are listed on the TSX and the NYSE under the trading symbol "RY". The table below sets forth, for the periods indicated, the per share high and low market prices for the Bank's common shares as reported on the TSX and the U.S. markets. TSX market prices are presented in Canadian dollars, and U.S. market prices are presented in U.S. dollars.

	Common shares TSX (in C\$)		Common shares U.S. markets (in US\$)	
	High	Low	High	Low
Annual Information for the past five fiscal years				
2011	61.53	44.38	63.53	42.27
2012	59.13	43.30	59.83	41.40
2013	70.75	54.51	68.02	54.41
2014	83.20	67.65	76.08	61.00
2015	83.87	68.05	74.09	51.27
Quarterly information for the past two fiscal years and subsequent quarters				
2014, quarter ended				
January 31	73.35	67.80	68.89	61.24
April 30	73.69	67.65	67.41	61.00
July 31	81.23	72.40	74.64	66.31
October 31	83.20	75.25	76.08	66.42
2015, quarter ended				
January 31	83.87	71.74	74.09	56.40
April 30	81.53	72.16	67.49	57.14
July 31	80.85	72.98	66.72	56.12
October 31	77.60	68.05	59.61	51.27
Monthly information for the most recent six months				
August 2015	77.60	68.05	59.61	51.27
September 2015	74.71	70.50	56.89	52.84
October 2015	76.62	70.64	58.20	53.48
November 2015	77.18	73.68	58.45	55.24
December 2015	77.67	71.93	58.00	52.28
January 2016 (through January 7, 2016)	73.58	70.20	52.80	49.83

Fluctuations in the exchange rate between the Canadian dollar and the U.S. dollar will affect any comparisons of the Bank's common shares traded on the TSX and the Bank's common shares traded on the U.S. markets.

DESCRIPTION OF DEBT SECURITIES

We may issue senior or subordinated debt securities. Neither the senior debt securities nor the subordinated debt securities will be secured by any of our property or assets or the property or assets of our subsidiaries. Thus, by owning a debt security, you are one of our unsecured creditors.

The senior debt securities will be issued under our senior debt indenture, dated as of October 23, 2003, between Royal Bank of Canada and The Bank of New York Mellon, as successor to the corporate trust business of JPMorgan Chase Bank, N.A., as trustee, as supplemented by a first supplemental indenture, dated as of July 21, 2006, and by a second supplemental indenture, dated as of February 28, 2007, and as further amended from time to time (collectively, the "senior debt indenture"), described below, and will be unsubordinated obligations that rank equally with all of our other unsecured and unsubordinated debt, including deposit liabilities, other than certain governmental claims in accordance with applicable law.

The subordinated debt securities will be issued under our subordinated debt indenture described below and will be subordinate in right of payment to all of our “senior indebtedness”, as defined in the subordinated debt indenture. Neither indenture limits our ability to incur additional indebtedness.

In the event we become insolvent, our governing legislation provides that priorities among payments of our deposit liabilities (including payments in respect of the senior debt securities) and payments of all of our other liabilities (including payments in respect of the subordinated debt securities) are to be determined in accordance with the laws governing priorities and, where applicable, by the terms of the indebtedness and liabilities. Because we have subsidiaries, our right to participate in any distribution of the assets of our banking or non-banking subsidiaries, upon a subsidiary’s dissolution, winding-up, liquidation or reorganization or otherwise, and thus your ability to benefit indirectly from such distribution, is subject to the prior claims of creditors of that subsidiary, except to the extent that we may be a creditor of that subsidiary and our claims are recognized. There are legal limitations on the extent to which some of our subsidiaries may extend credit, pay dividends or otherwise supply funds to, or engage in transactions with, us or some of our other subsidiaries. Accordingly, the debt securities will be structurally subordinated to all existing and future liabilities of our subsidiaries, and holders of debt securities should look only to our assets for payments on the debt securities.

Neither the senior debt securities nor the subordinated debt securities will constitute deposits insured under the Canada Deposit Insurance Corporation Act or by the United States Federal Deposit Insurance Corporation or any other Canadian or United States governmental agency or instrumentality.

When we refer to “debt securities” in this prospectus, we mean both the senior debt securities and the subordinated debt securities.

The Senior and Subordinated Debt Indentures

The senior debt securities are governed by the senior debt indenture, and the subordinated debt securities will be governed by the subordinated debt indenture. When we refer to the “indentures”, we mean both the senior debt indenture and the subordinated debt indenture, and when we refer to the “indenture”, we mean either the senior debt indenture or the subordinated debt indenture. The senior debt indenture is a contract between us and The Bank of New York Mellon, as successor to the corporate trust business of JPMorgan Chase Bank, N.A., which acts as trustee. The indentures are substantially identical, except for (i) the provisions relating to events of default, which are more limited in the subordinated debt indenture, (ii) the provisions relating to subordination, which are included only in the subordinated debt indenture, and (iii) the provisions relating to possible conversions or exchanges, which are only included in the senior debt indenture.

Reference to the indenture or the trustee, with respect to any debt securities, means the indenture under which those debt securities are issued and the trustee under that indenture.

The trustee has two main roles:

- The trustee can enforce the rights of holders against us if we default on our obligations under the terms of the indenture or the debt securities. There are some limitations on the extent to which the trustee acts on behalf of holders, described below under “— Events of Default — Remedies If an Event of Default Occurs”.
- The trustee performs administrative duties for us, such as sending interest payments and notices to holders and transferring a holder’s debt securities to a new buyer if a holder sells.

The indentures and their associated documents contain the full legal text of the matters described in this section. The indentures and the debt securities will be governed by New York law, except that the subordination provisions in the subordinated debt indenture and certain provisions relating to the status of the senior debt securities under Canadian law in the senior debt indenture will be governed by the laws of the Province of Ontario and the laws of Canada applicable therein. A copy of each of the senior debt indenture, the supplements to the senior debt indenture and the form of subordinated debt indenture is an exhibit to our Registration Statement. See “Where You Can Find More Information” above for information on how to obtain a copy.

General

We may issue as many distinct series of debt securities under either indenture as we wish. The provisions of the senior debt indenture and the subordinated debt indenture allow us not only to issue debt securities with terms different from those previously issued under the applicable indenture, but also to “re-open” a previous issue of a series of debt securities and issue additional debt securities of that series. We may issue debt securities in amounts that exceed the total amount specified on the cover of your prospectus supplement at any time without your consent and without notifying you.

This section summarizes the material terms of the debt securities that are common to all series, although the prospectus supplement that describes the terms of each series of debt securities may also describe differences from the material terms summarized here.

Because this section is a summary, it does not describe every aspect of the debt securities. This summary is subject to and qualified in its entirety by reference to all the provisions of the indentures, including definitions of certain terms used in the indentures. In this summary, we describe the meaning of only some of the more important terms. For your convenience, we also include references in parentheses to certain sections of the indentures. Whenever we refer to particular sections or defined terms of the indentures in this prospectus or in the prospectus supplement, such sections or defined terms are incorporated by reference here or in the prospectus supplement. You must look to the indentures for the most complete description of what we describe in summary form in this prospectus.

This summary is also subject to and qualified by reference to the description of the particular terms of your series described in the prospectus supplement. Those terms may vary from the terms described in this prospectus. The prospectus supplement relating to each series of debt securities will be attached to the front of this prospectus. There may also be a further prospectus supplement, known as a pricing supplement, which describes additional terms of debt securities you are offered.

We may issue the debt securities as original issue discount securities, which will be offered and sold at a substantial discount below their stated principal amount. (Indenture Section 101) The prospectus supplement relating to the original issue discount securities will describe U.S. federal income tax consequences and other special considerations applicable to them. The debt securities may also be issued as indexed securities or securities denominated in foreign currencies or currency units, as described in more detail in the prospectus supplement relating to any of the particular debt securities. The prospectus supplement relating to specific debt securities will also describe any special considerations and any material additional tax considerations applicable to such debt securities.

In addition, the specific financial, legal and other terms particular to a series of debt securities will be described in the prospectus supplement and, if applicable, a pricing supplement relating to the series. The prospectus supplement and, if applicable, the pricing supplement relating to a series of debt securities will describe the following terms of the series:

- the title of the series of debt securities;
- whether it is a series of senior debt securities or a series of subordinated debt securities;
- any limit on the aggregate principal amount of the series of debt securities;
- the person to whom interest on a debt security is payable, if other than the holder on the regular record date;
- the date or dates on which the series of debt securities will mature;
- the rate or rates, which may be fixed or variable per annum, at which the series of debt securities will bear interest, if any, and the date or dates from which that interest, if any, will accrue;

- the place or places where the principal of, premium, if any, and interest on the debt securities is payable;
- the terms, if any, on which any securities may or shall be converted into or exchanged at the option of the Bank or otherwise for shares or other securities of the Bank or another entity or other entities, into the cash value thereof or into any combination of the foregoing, any specific terms relating to the adjustment thereof and the period during which such securities may or shall be so converted or exchanged;
- the specific terms of any Non-Viability Contingent Capital Provisions (as defined below under “— Special Provisions Related to the Subordinated Debt Securities — Non-Viability Contingent Capital Provisions”);
- the dates on which interest, if any, on the series of debt securities will be payable and the regular record dates for the interest payment dates;
- any mandatory or optional sinking funds or similar provisions or provisions for redemption at our option or the option of the holder;
- the date, if any, after which, and the price or prices at which, the series of debt securities may, in accordance with any optional or mandatory redemption provisions, be redeemed and the other detailed terms and provisions of those optional or mandatory redemption provisions, if any;
- if other than denominations of \$1,000 and any integral multiples thereof, the denominations in which the series of debt securities will be issuable;
- the currency of payment of principal, premium, if any, and interest on the series of debt securities;
- if the currency of payment for principal, premium, if any, and interest on the series of debt securities is subject to our election or that of a holder, the currency or currencies in which payment can be made and the period within which, and the terms and conditions upon which, the election can be made;
- any index, formula or other method used to determine the amount of payment of principal or premium, if any, and interest on the series of debt securities;
- the applicability of the provisions described under “— Defeasance” below;
- any event of default under the series of debt securities if different from those described under “— Events of Default” below;
- if the debt securities will be issued in bearer form, any special provisions relating to bearer securities;
- if the series of debt securities will be issuable only in the form of a global security, the depositary or its nominee with respect to the series of debt securities and the circumstances under which the global security may be registered for transfer or exchange in the name of a person other than the depositary or the nominee; and
- any other special feature of the series of debt securities.

We will offer debt securities that are convertible or exchangeable into securities of another entity or other entities only under circumstances that do not require registration of the underlying securities under the Securities Act of 1933, as amended, at the time we offer such debt securities.

Overview of Remainder of This Description

The remainder of this description summarizes:

- additional mechanics relevant to the debt securities under normal circumstances, such as how holders record the transfer of ownership and where we make payments;
- holders' rights in several special situations, such as if we merge with another company or if we want to change a term of the debt securities;
- subordination provisions in the subordinated debt indenture that may prohibit us from making payment on those securities;
- our right to release ourselves from all or some of our obligations under the debt securities and the indenture by a process called defeasance; and
- holders' rights if we default or experience other financial difficulties.

Form, Exchange and Transfer

Unless we specify otherwise in the prospectus supplement, the debt securities will be issued:

- only in fully-registered form;
- without interest coupons; and
- in denominations that are even multiples of \$1,000. (Indenture Section 302)

If a debt security is issued as a registered global debt security, only the depositary — *e.g.*, DTC, Euroclear, Clearstream and CDS, each as defined below under “—Ownership and Book-Entry Issuance” — will be entitled to transfer and exchange the debt security as described in this subsection because the depositary will be the sole registered holder of the debt security and is referred to below as the “holder”. Those who own beneficial interests in a global security do so through participants in the depositary's securities clearance system, and the rights of these indirect owners will be governed by the applicable procedures of the depositary and its participants. We describe book-entry procedures below under “—Ownership and Book-Entry Issuance”.

Holders of securities issued in fully-registered form may have their debt securities broken into more debt securities of smaller denominations of not less than \$1,000, or combined into fewer debt securities of larger denominations, as long as the total principal amount is not changed. (Indenture Section 305) This is called an exchange.

Holders may exchange or register the transfer of debt securities at the office of the trustee. Debt securities may be transferred by endorsement. Holders may also replace lost, stolen or mutilated debt securities at that office. The trustee has been appointed as our agent for registering debt securities in the names of holders and registering the transfer of debt securities. We may change this appointment to another entity or perform these tasks ourselves. The entity performing the role of maintaining the list of registered holders is called the security registrar. It also records transfers. (Indenture Section 305) The trustee may require an indemnity before replacing any debt securities.

Holders will not be required to pay a service charge to register the transfer or exchange of debt securities, but holders may be required to pay for any tax or other governmental charge associated with the exchange or transfer. The registration of a transfer or exchange will only be made if the security registrar is satisfied with your proof of ownership.

If we designate additional transfer agents, they will be named in the prospectus supplement. We may cancel the designation of any particular transfer agent. We may also approve a change in the office through which any transfer agent acts. (Indenture Section 1002)

If the debt securities are redeemable and we redeem less than all of the debt securities of a particular series, we may block the registration of transfer or exchange of debt securities during the period beginning 15 days before the day we mail the notice of redemption and ending on the day of that mailing, in order to freeze the list of holders entitled to receive the mailing. We may also refuse to register transfers or exchanges of debt securities selected for redemption, except that we will continue to permit registration of transfers and exchanges of the unredeemed portion of any debt security being partially redeemed. (Indenture Section 305)

Payment and Paying Agents

We will pay interest to the person listed in the trustee's records at the close of business on a particular day in advance of each due date for interest, even if that person no longer owns the debt security on the interest due date. That particular day, usually about two weeks in advance of the interest due date, is called the regular record date and will be stated in the prospectus supplement. (Indenture Section 307) Holders buying and selling debt securities must work out between them how to compensate for the fact that we will pay all the interest for an interest period to the one who is the registered holder on the regular record date. The most common manner is to adjust the sale price of the securities to prorate interest fairly between buyer and seller. This prorated interest amount is called accrued interest.

We will pay interest, principal and any other money due on the debt securities at the corporate trust office of the trustee in the City of New York. That office is currently located at 101 Barclay Street - Floor 4E, New York, NY 10286. Holders must make arrangements to have their payments picked up at or wired from that office. We may also choose to pay interest by mailing checks.

Book-entry and other indirect holders should consult their banks, brokers or other financial institutions for information on how they will receive payments.

We may also arrange for additional payment offices and may cancel or change these offices, including our use of the trustee's corporate trust office. These offices are called paying agents. We may also choose to act as our own paying agent or choose one of our subsidiaries to do so. We must notify holders of changes in the paying agents for any particular series of debt securities. (Indenture Section 1002)

Conversion or Exchange of Senior Debt Securities

If and to the extent mentioned in the relevant prospectus supplement, any senior debt securities series may be optionally or mandatorily convertible or exchangeable for stock or other securities of the Bank or another entity or entities, into the cash value therefor or into any combination of the above, the specific terms on which any senior debt securities series may be so converted or exchanged will be described in the relevant prospectus supplement. These terms may include provisions for conversion or exchange, either mandatorily, at the holder's option or at our option, in which case the amount or number of securities the senior debt securities holders would receive would be calculated at the time and manner described in the relevant prospectus supplement. (Indenture Section 301)

Notices

We and the trustee will send notices regarding the debt securities only to registered holders, using their addresses as listed in the trustee's records. (Indenture Sections 101 and 106) With respect to who is a registered "holder" for this purpose, see "Ownership and Book-Entry Issuance".

Regardless of who acts as paying agent, all money paid by us to a paying agent that remains unclaimed at the end of two years after the amount is due to holders will be repaid to us. After that two-year period, holders may look to us for payment and not to the trustee or any other paying agent. (Indenture Section 1003)

Mergers and Similar Events

Under the indentures, we are generally permitted to consolidate or merge with another entity. We are also permitted to sell or lease substantially all of our assets to another entity, or to buy or lease substantially all of the assets of another entity. However, we may not take any of these actions unless all the following conditions are met:

- When we merge, amalgamate, consolidate or otherwise are combined with, or acquired by, another entity or sell or lease substantially all of our assets, the surviving, resulting or acquiring entity must be a properly organized entity and must be legally responsible for the debt securities, whether by agreement, operation of law or otherwise.
- The merger, amalgamation, consolidation, other combination, sale or lease of assets must not cause a default on the debt securities. A default for this purpose would include any event that would be an event of default if the requirements for giving us default notice or our default having to exist for a specific period of time were disregarded.

If the conditions described above are satisfied with respect to any series of debt securities, we will not need to obtain the approval of the holders of those debt securities in order to merge or consolidate or to sell our assets. Also, these conditions will apply only if we wish to merge or consolidate with another entity or sell substantially all of our assets to another entity. We will not need to satisfy these conditions if we enter into other types of transactions, including any transaction in which we acquire the stock or assets of another entity, any transaction that involves a change of control but in which we do not merge or consolidate and any transaction in which we sell less than substantially all of our assets. It is possible that this type of transaction may result in a reduction in our credit rating, may reduce our operating results or may impair our financial condition. Holders of our debt securities, however, will have no approval right with respect to any transaction of this type.

Modification and Waiver of the Debt Securities

There are four types of changes we can make to either indenture and the debt securities issued under that indenture.

1. *Changes Requiring Approval of All Holders.* First, there are changes that cannot be made to the indenture or the debt securities without specific approval of each holder of a debt security affected in any material respect by the change under a particular debt indenture. The following is a list of those types of changes:

- change the stated maturity of the principal or reduce the interest on a debt security;
- reduce any amounts due on a debt security;
- reduce the amount of principal payable upon acceleration of the maturity of a debt security (including the amount payable on an original issue discount security) following a default;
- change the currency of payment on a debt security;
- change the place of payment for a debt security;
- impair a holder's right to sue for payment;
- impair the holder's right to require repurchase on the original terms of those debt securities that provide a right of repurchase;
- reduce the percentage of holders of debt securities whose consent is needed to modify or amend the indenture;

- reduce the percentage of holders of debt securities whose consent is needed to waive compliance with certain provisions of the indenture or to waive certain defaults; or
- modify any other aspect of the provisions dealing with modification and waiver of the indenture. (Indenture Section 902)

2. *Changes Requiring a Majority Vote.* The second type of change to the indenture and the debt securities is the kind that requires a vote in favor of the change by holders of debt securities owning not less than a majority of the principal amount of the particular series affected. Most changes, including any change or elimination of any provision of the indenture and any modification of any right of the noteholders, require a majority vote. A smaller class of changes does not require a majority vote including clarifying changes and other changes that would not adversely affect in any material respect holders of the debt securities. (Indenture Section 901) We may also obtain a waiver of a past default from the holders of debt securities owning a majority of the principal amount of the particular series affected. However, we cannot obtain a waiver of a payment default or any other aspect of the indenture or the debt securities listed in the first category described above under “— Changes Requiring Approval of All Holders” unless we obtain the individual consent of each holder to the waiver. (Indenture Section 513)

3. *Changes Not Requiring Approval.* The third type of change to the indenture and the debt securities does not require any vote by holders of debt securities. This type is limited to clarifications and certain other changes that would not adversely affect in any material respect holders of the debt securities. (Indenture Section 901)

4. We may also make changes or obtain waivers that do not adversely affect in any material respect a particular debt security, even if they affect other debt securities. In those cases, we do not need to obtain the approval of the holder of that debt security; we need only obtain any required approvals from the holders of the affected debt securities.

Modification of Subordination Provisions. We may not modify the subordination provisions of the subordinated debt indenture in a manner that would adversely affect in any material respect the outstanding subordinated debt securities of any one or more series without the consent of the holders of a majority of the principal amount of all affected series, voting together as one class. We may not modify the subordinated debt indenture or any terms of any outstanding subordinated debt securities in a manner that would affect the regulatory capital classification of the subordinated debt securities under the guidelines for capital adequacy requirements for banks in Canada without the consent of the Superintendent of Financial Institutions (Canada) (the “Superintendent”).

Further Details Concerning Voting. When taking a vote, we will use the following rules to decide how much principal amount to attribute to a debt security:

- For original issue discount securities, we will use the principal amount that would be due and payable on the voting date if the maturity of the debt securities were accelerated to that date because of a default.
- For debt securities whose principal amount is not known (for example, because it is based on an index), we will use a special rule for that debt security described in the prospectus supplement.
- For debt securities denominated in one or more non-U.S. currencies or currency units, we will use the U.S. dollar equivalent.

Debt securities will not be considered outstanding, and therefore not eligible to vote, if we have given a notice of redemption and deposited or set aside in trust for the holders money for the payment or redemption of the debt securities. Debt securities will also not be eligible to vote if they have been fully defeased as described below under “— Defeasance — Full Defeasance”. (Indenture Section 1402)

We will generally be entitled to set any day as a record date for the purpose of determining the holders of outstanding debt securities that are entitled to vote or take other action under the indenture. In certain limited

circumstances, the trustee will be entitled to set a record date for action by holders. If the trustee or we set a record date for a vote or other action to be taken by holders of a particular series, that vote or action may be taken only by persons who are holders of outstanding securities of that series on the record date. We or the trustee, as applicable, may shorten or lengthen this period from time to time. This period, however, may not extend beyond the 180th day after the record date for the action. (Indenture Sections 104 and 512)

Book-entry and other indirect holders should consult their banks, brokers or other financial institutions for information on how approval may be granted or denied if we seek to change the indenture or the debt securities or request a waiver.

Special Provisions Related to the Subordinated Debt Securities

The subordinated debt securities issued under the subordinated debt indenture will be our direct unsecured obligations constituting subordinated indebtedness for the purpose of the *Bank Act* (Canada) and will therefore rank subordinate to our deposits. Holders of subordinated debt securities should recognize that contractual provisions in the subordinated debt indenture may prohibit us from making payments on these securities.

If we become insolvent or are wound-up, the subordinated debt securities will rank equally and ratably with, but not prior to, all other subordinated debt and subordinate in right of payment to the prior payment in full of (i) our indebtedness then outstanding, other than subordinated indebtedness, and (ii) all indebtedness to which our other subordinated indebtedness is subordinate in right of payment to the same extent as such other subordinated indebtedness. As of October 31, 2015, we had approximately \$1,003 billion of senior indebtedness, including deposits, outstanding, which would rank ahead of the subordinated debt securities. The only outstanding subordinated indebtedness issued to date has been issued pursuant to:

- our indentures with Computershare Trust Company of Canada, dated October 1, 1984, June 6, 1986 and June 18, 2004, as supplemented from time to time;
- our amended and restated issue and paying agency agreement with Royal Bank of Canada, London branch, Fortis Banque Luxembourg S.A., ING Belgium S.A./N.V., Royal Bank of Canada (Suisse) and Royal Bank of Canada, Toronto branch, dated July 14, 2006, as supplemented from time to time; and
- a trust deed between RBC Royal Bank (Trinidad & Tobago) Limited and RBC Trust (Trinidad & Tobago) Limited dated November 1, 2012 in respect of the issuance of debentures by our subsidiary.

For these purposes, “indebtedness” at any time means:

- (i) the deposit liabilities of the Bank at such time; and
- (ii) all other liabilities and obligations of the Bank to third parties (other than fines or penalties which pursuant to the *Bank Act* (Canada) are a last charge on the assets of the Bank in the case of insolvency of such bank and obligations to shareholders of such bank) which would entitle such third parties to participate in a distribution of the Bank’s assets in the event of the insolvency or winding-up of the Bank.

For these purposes, “subordinated indebtedness” at any time means:

- (i) the liability of the Bank in respect of the principal of and premium, if any, and interest on its outstanding subordinated indebtedness outlined above;
- (ii) any indebtedness which ranks equally with and not prior to the outstanding subordinated indebtedness, in right of payment in the event of the insolvency or winding-up of the Bank and which, pursuant to the terms of the instrument evidencing or creating the same, is expressed to be subordinate in right of payment to all indebtedness to which the outstanding subordinated indebtedness is subordinate in right of payment to at least the

same extent as the outstanding subordinated indebtedness is subordinated thereto pursuant to the terms of the instrument evidencing or creating the same;

(iii) any indebtedness which ranks subordinate to and not equally with or prior to the outstanding subordinated indebtedness, in right of payment in the event of the insolvency or winding-up of the Bank and which, pursuant to the terms of the instrument evidencing or creating the same, is expressed to be subordinate in right of payment to all indebtedness to which the outstanding subordinated indebtedness is subordinate in right of payment to at least the same extent as the outstanding subordinated indebtedness is subordinate pursuant to the terms of the instrument evidencing or creating the same; and

(iv) the subordinated debt securities, which will rank equally to the Bank's outstanding subordinated indebtedness.

The subordination provisions of the subordinated debt indenture will be governed by the laws of the Province of Ontario and the federal laws of Canada applicable therein.

Non-Viability Contingent Capital Provisions

In accordance with capital adequacy requirements adopted by the Office of the Superintendent of Financial Institutions Canada ("OSFI"), in order to qualify as regulatory capital, non-common capital instruments issued after January 1, 2013, including subordinated debt securities, must include terms providing for the full and permanent conversion of such securities into common shares of the Bank upon the occurrence of a "Non-Viability Trigger Event" ("Non-Viability Contingent Capital Provisions").

"Non-Viability Trigger Event" has the meaning set out in the OSFI Guideline for Capital Adequacy Requirements (CAR), Chapter 2 – Definition of Capital, effective January 2013, as such term may be amended or superseded by OSFI from time to time, which term currently provides that each of the following constitutes a Non-Viability Trigger Event:

- the Superintendent publicly announces that the Bank has been advised, in writing, that the Superintendent is of the opinion that the Bank has ceased, or is about to cease, to be viable and that, after the conversion of all contingent instruments and taking into account any other factors or circumstances that are considered relevant or appropriate, it is reasonably likely that the viability of the Bank will be restored or maintained; or
- a federal or provincial government in Canada publicly announces that the Bank has accepted or agreed to accept a capital injection, or equivalent support, from the federal government or any provincial government or political subdivision or agent or agency thereof without which the Bank would have been determined by the Superintendent to be non-viable.

The specific terms of any Non-Viability Contingent Capital Provisions for any subordinated debt securities that we issue under this prospectus will be described in one or more prospectus supplements relating to such securities. If subordinated debt securities issued under the subordinated debt indenture are converted into common shares in accordance with Non-Viability Contingent Capital Provisions, the rights, terms and conditions of such securities, including with respect to priority and rights on liquidation, will no longer be relevant as all such securities will have been converted on a full and permanent basis into common shares ranking on parity with all other outstanding common shares of the Bank. The Non-Viability Contingent Capital Provisions do not apply to senior debt securities offered under this prospectus.

The Non-Viability Contingent Capital Provisions of the subordinated indenture will be governed by the laws of the Province of Ontario and the federal laws of Canada applicable therein.

Defeasance

Unless otherwise specified in the applicable prospectus supplement, the following discussion of full defeasance and covenant defeasance will be applicable to each series of debt securities that is denominated in U.S. dollars and has a fixed rate of interest and will apply to other series of debt securities if we so specify in the prospectus supplement. (Indenture Section 1401)

Full Defeasance. If there is a change in U.S. federal tax law, as described below, we can legally release ourselves from any payment or other obligations on the debt securities, called full defeasance, if we put in place the following other arrangements for holders to be repaid:

- We must deposit in trust for the benefit of all holders of the debt securities a combination of money and notes or bonds of the U.S. government or a U.S. government agency or U.S. government-sponsored entity (the obligations of which are backed by the full faith and credit of the U.S. government) that will generate enough cash to make interest, principal and any other payments on the debt securities on their various due dates.
- There must be a change in current U.S. federal tax law or an Internal Revenue Service (“IRS”) ruling that lets us make the above deposit without causing the holders to be taxed on the debt securities any differently than if we did not make the deposit and just repaid the debt securities ourselves. (Under current federal tax law, the deposit and our legal release from the obligations pursuant to the debt securities would be treated as though we took back your debt securities and gave you your share of the cash and notes or bonds deposited in trust. In that event, you could recognize gain or loss on the debt securities you give back to us.)
- We must deliver to the trustee a legal opinion of our counsel confirming the tax-law change described above and that the holders of the debt securities will not recognize income, gain or loss for federal income tax purposes as a result of such deposit, defeasance and discharge and will be subject to federal income tax on the same amounts and in the same manner and at the same times as would be the case if such deposit, defeasance and discharge had not occurred. (Indenture Sections 1402 and 1404)
- In the case of the subordinated debt securities, the following requirement must also be met:
 - No event or condition may exist that, under the provisions described under “— Subordination Provisions” above, would prevent us from making payments of principal, premium or interest on those subordinated debt securities on the date of the deposit referred to above or during the 90 days after that date.

If we ever did accomplish full defeasance, as described above, you would have to rely solely on the trust deposit for repayment on the debt securities. You could not look to us for repayment in the event of any shortfall. Subject to the foregoing conditions, and notwithstanding that a full defeasance may be authorized pursuant to the subordinated debt indenture in respect of a series of subordinated debt securities, the Bank will not take such action in respect of a series of subordinated debt securities until at least the fifth anniversary of the date of issuance of such series.

Covenant Defeasance. Even without a change in current U.S. federal tax law, we can make the same type of deposit as described above, and we will be released from the restrictive covenants under the debt securities that may be described in the prospectus supplement. This is called covenant defeasance. In that event, you would lose the protection of these covenants but would gain the protection of having money and U.S. government or U.S. government agency notes or bonds set aside in trust to repay the debt securities. In order to achieve covenant defeasance, we must do the following:

- We must deposit in trust for the benefit of all holders of the debt securities a combination of money and notes or bonds of the U.S. government or a U.S. government agency or U.S.

government sponsored entity (the obligations of which are backed by the full faith and credit of the U.S. government) that will generate enough cash to make interest, principal and any other payments on the debt securities on their various due dates.

- We must deliver to the trustee a legal opinion of our counsel confirming that the holders of the debt securities will not recognize income, gain or loss for federal income tax purposes as a result of such deposit and covenant defeasance and will be subject to federal income tax on the same amounts and in the same manner and at the same times as would be the case if such deposit and covenant defeasance had not occurred.

If we accomplish covenant defeasance, certain provisions of the indenture and the debt securities would no longer apply:

- Covenants applicable to the series of debt securities and described in the prospectus supplement.
- Any events of default relating to breach of those covenants.

If we accomplish covenant defeasance, you can still look to us for repayment of the debt securities if there were a shortfall in the trust deposit. In fact, if one of the remaining events of default occurs (such as a bankruptcy) and the debt securities become immediately due and payable, there may be such a shortfall. (Indenture Sections 1403 and 1404)

Events of Default

You will have special rights if an event of default occurs and is not cured, as described later in this subsection.

What is an Event of Default?

Under the senior debt indenture, the term “Event of Default” means any of the following:

- We do not pay the principal of or any premium on a debt security.
- We do not pay interest on a debt security within 30 days of its due date.
- We become insolvent or bankrupt or subject to the provisions of the *Winding-Up and Restructuring Act* (Canada), we go into liquidation either voluntarily or under an order of a court of competent jurisdiction, or we otherwise acknowledge our insolvency.
- Any other event of default described in the prospectus supplement occurs. (Indenture Section 501)

Under the subordinated debt indenture, the term “Event of Default” means any of the following:

- We become insolvent or bankrupt or subject to the provisions of the *Winding-Up and Restructuring Act* (Canada), we go into liquidation either voluntarily or under an order of a court of competent jurisdiction, or we otherwise acknowledge our insolvency.
- Any other event of default described in the prospectus supplement occurs. (Indenture Section 501)

Remedies If an Event of Default Occurs. If an Event of Default occurs, the trustee will have special duties. In that situation, the trustee will be obligated to use its rights and powers under the indentures, and to use the same degree of care and skill in doing so that a prudent person would use in that situation in conducting his or her own affairs. If an Event of Default has occurred and has not been cured, the trustee or the holders of at least 25% in principal amount of the debt securities of the affected series may declare the entire principal amount of all the debt securities of that series (or, in the case of original issue discount securities, the portion of the principal amount that is

specified in the terms of the affected debt security) to be due and immediately payable. This is called a declaration of acceleration of maturity. However, a declaration of acceleration of maturity may be cancelled, but only before a judgment or decree based on the acceleration has been obtained, by the holders of at least a majority in principal amount of the debt securities of the affected series. If you are the holder of a subordinated debt security, the principal amount of the subordinated debt security will not be paid and may not be required to be paid at any time prior to the relevant maturity date, except in the event of our insolvency or winding-up. (Indenture Section 502)

You should read carefully the prospectus supplement relating to any series of debt securities which are original issue discount securities for the particular provisions relating to acceleration of the maturity of a portion of the principal amount of original issue discount securities upon the occurrence of an event of default and its continuation.

Except in cases of default in which the trustee has the special duties described above, the trustee is not required to take any action under the indenture at the request of any holders unless the holders offer the trustee reasonable protection from expenses and liability called an indemnity. (Indenture Section 603) If reasonable indemnity is provided, the holders of a majority in principal amount of the outstanding securities of the relevant series may direct the time, method and place of conducting any lawsuit or other formal legal action seeking any remedy available to the trustee. These majority holders may also direct the trustee in performing any other action under the applicable indenture with respect to the debt securities of that series. (Indenture Section 512)

Before you bypass the trustee and bring your own lawsuit or other formal legal action or take other steps to enforce your rights or protect your interests relating to the debt securities, the following must occur:

- the holder of the debt security must give the trustee written notice that an event of default has occurred and remains uncured;
- the holders of 25% in principal amount of all outstanding securities of the relevant series must make a written request that the trustee take action because of the default, and must offer reasonable indemnity to the trustee against the cost and other liabilities of taking that action; and
- the trustee must have not taken action for 90 days after receipt of the above notice and offer of indemnity. (Indenture Section 507)

However, you are entitled at any time to bring a lawsuit for the payment of money due on your debt security on or after its due date. (Indenture Section 508)

Book-entry and other indirect holders should consult their banks, brokers or other financial institutions for information on how to give notice or direction to or make a request of the trustee and to make or cancel a declaration of acceleration.

We will give to the trustee every year a written statement of certain of our officers certifying that to their knowledge we are in compliance with the applicable indenture and the debt securities issued under it, or else specifying any default. (Indenture Section 1004)

Ownership and Book-Entry Issuance

In this section, we describe special considerations that will apply to registered securities issued in global *i.e.*, book-entry, form. First we describe the difference between registered ownership and indirect ownership of registered securities. Then we describe special provisions that apply to global securities.

Who is the Registered Owner of a Security?

Each debt security will be represented either by a certificate issued in definitive form to a particular investor or by one or more global securities representing securities. We refer to those who have securities registered in their own names, on the books that we or the trustee maintain for this purpose, as the “registered holders” of those

securities. Subject to limited exceptions, we and the trustee are entitled to treat the registered holder of a security as the person exclusively entitled to vote, to receive notices, to receive any interest or other payment in respect of the security and to exercise all the rights and powers as an owner of the security. We refer to those who own beneficial interests in securities that are not registered in their own names as indirect owners of those securities. As we discuss below, indirect owners are not registered holders, and investors in securities issued in book-entry form or in street name will be indirect owners.

Book-Entry Owners. Unless otherwise noted in your prospectus supplement, we will issue each security in book-entry form only. This means securities will be represented by one or more global securities registered in the name of a financial institution that holds them as depositary on behalf of other financial institutions that participate in the depositary's book-entry system. These participating institutions, in turn, hold beneficial interests in the securities on behalf of themselves or their customers.

Under each indenture (and the *Bank Act* (Canada) in the case of subordinated indebtedness), subject to limited exceptions, only the person in whose name a security is registered is recognized as the holder of that security. Consequently, for securities issued in global form, we will recognize only the depositary as the holder of the securities and we will make all payments on the securities, including deliveries of any property other than cash, to the depositary. The depositary passes along the payments it receives to its participants, which in turn pass the payments along to their customers who are the beneficial owners. The depositary and its participants do so under agreements they have made with one another or with their customers; they are not obligated to do so under the terms of the securities.

As a result, investors will not own securities directly. Instead, they will own beneficial interests in a global security, through a bank, broker or other financial institution that participates in the depositary's book-entry system or holds an interest through a participant. As long as the securities are issued in global form, investors will be indirect owners, and not registered holders, of the securities.

Street Name Owners. We may terminate an existing global security or issue securities initially in non-global form. In these cases, investors may choose to hold their securities in their own names or in street name. Securities held by an investor in street name would be registered in the name of a bank, broker or other financial institution that the investor chooses, and the investor would hold only a beneficial interest in those securities through an account he or she maintains at that institution.

For securities held in street name, we will, subject to limited exceptions, recognize only the intermediary banks, brokers and other financial institutions in whose names the securities are registered as the holders of those securities, and we will make all payments on those securities, including deliveries of any property other than cash, to them. These institutions pass along the payments they receive to their customers who are the beneficial owners, but only because they agree to do so in their customer agreements or because they are legally required to do so. Investors who hold securities in street name will be indirect owners, not registered holders, of those securities.

Registered Holders. Subject to limited exceptions, our obligations, as well as the obligations of the trustee under any indenture and the obligations, if any, of any other third parties employed by us, run only to the registered holders of the securities. We do not have obligations to investors who hold beneficial interests in global securities, in street name or by any other indirect means. This will be the case whether an investor chooses to be an indirect owner of a security or has no choice because we are issuing the securities only in global form.

For example, once we make a payment or give a notice to the registered holder, we have no further responsibility for that payment or notice even if that holder is required, under agreements with depositary participants or customers or by law, to pass it along to the indirect owners but does not do so. Similarly, if we want to obtain the approval of the holders for any purpose — for example, to amend the indenture for a series of debt securities or to relieve us of the consequences of a default or of our obligation to comply with a particular provision of an indenture — we would seek the approval only from the registered holders, and not the indirect owners, of the relevant securities. Whether and how the registered holders contact the indirect owners is up to the registered holders.

When we refer to “you” in this prospectus, we mean all purchasers of the securities being offered by this prospectus, whether they are the registered holders or only indirect owners of those securities. When we refer to “your securities” in this prospectus, we mean the securities in which you will hold a direct or indirect interest.

Special Considerations for Indirect Owners. If you hold securities through a bank, broker or other financial institution, either in book-entry form or in street name, you should check with your own institution to find out:

- how it handles securities payments and notices;
- whether it imposes fees or charges;
- how it would handle a request for the holders’ consent, if ever required;
- how it would exercise rights under the securities if there were a default or other event triggering the need for holders to act to protect their interests; and
- if the securities are in book-entry form, how the depository’s rules and procedures will affect these matters.

What is a Global Security?

Unless otherwise noted in the applicable prospectus supplement, we will issue each security in book-entry form only. Each security issued in book-entry form will be represented by a global security that we deposit with and register in the name of one or more financial institutions or clearing systems, or their nominees, which we select. A financial institution or clearing system that we select for any security for this purpose is called the “depository” for that security. A security will usually have only one depository but it may have more. Each series of securities will have one or more of the following as the depositaries:

- The Depository Trust Company, New York, New York, which is known as “DTC”;
- Euroclear System, which is known as “Euroclear”;
- Clearstream Banking, *société anonyme*, Luxembourg, which is known as “Clearstream”;
- CDS Clearing and Depository Services Inc., which is known as “CDS”; and
- any other clearing system or financial institution named in the prospectus supplement.

The depositaries named above may also be participants in one another’s systems. Thus, for example, if DTC is the depository for a global security, investors may hold beneficial interests in that security through Euroclear, Clearstream or CDS, as DTC participants. The depository or depositaries for your securities will be named in your prospectus supplement; if none is named, the depository will be DTC.

A global security may represent one or any other number of individual securities. Generally, all securities represented by the same global security will have the same terms. We may, however, issue a global security that represents multiple securities of the same kind, such as debt securities, that have different terms and are issued at different times. We call this kind of global security a master global security. Your prospectus supplement will not indicate whether your securities are represented by a master global security.

A global security may not be transferred to or registered in the name of anyone other than the depository or its nominee, unless special termination situations arise. We describe those situations below under “— Holder’s Option to Obtain a Non-Global Security; Special Situations When a Global Security Will Be Terminated”. As a result of these arrangements, the depository, or its nominee, will be the sole registered owner and holder of all securities represented by a global security, and investors will be permitted to own only indirect interests in a global security. Indirect interests must be held by means of an account with a broker, bank or other financial institution that

in turn has an account with the depository or with another institution that does. Thus, an investor whose security is represented by a global security will not be a holder of the security, but only an indirect owner of an interest in the global security.

If the prospectus supplement for a particular security indicates that the security will be issued in global form only, then the security will be represented by a global security at all times unless and until the global security is terminated. We describe the situations in which this can occur below under “— Holder’s Option to Obtain a Non-Global Security; Special Situations When a Global Security Will Be Terminated”. If termination occurs, we may issue the securities through another book-entry clearing system or decide that the securities may no longer be held through any book-entry clearing system.

Special Considerations for Global Securities. As an indirect owner, an investor’s rights relating to a global security will be governed by the account rules of the depository and those of the investor’s bank, broker, financial institution or other intermediary through which it holds its interest (*e.g.*, Euroclear, Clearstream or CDS, if DTC is the depository), as well as general laws relating to securities transfers. We do not recognize this type of investor or any intermediary as a holder of securities and instead deal only with the depository that holds the global security.

If securities are issued only in the form of a global security, an investor should be aware of the following:

- an investor cannot cause the securities to be registered in his or her own name, and cannot obtain non-global certificates for his or her interest in the securities, except in the special situations we describe below;
- an investor will be an indirect holder and must look to his or her own bank, broker or other financial institution for payments on the securities and protection of his or her legal rights relating to the securities, as we describe above under “— Who Is the Registered Owner of a Security?”;
- an investor may not be able to sell interests in the securities to some insurance companies and other institutions that are required by law to own their securities in non-book-entry form;
- an investor may not be able to pledge his or her interest in a global security in circumstances in which certificates representing the securities must be delivered to the lender or other beneficiary of the pledge in order for the pledge to be effective;
- the depository’s policies will govern payments, deliveries, transfers, exchanges, notices and other matters relating to an investor’s interest in a global security, and those policies may change from time to time. We and the trustee will have no responsibility for any aspect of the depository’s policies, actions or records of ownership interests in a global security. We and the trustee also do not supervise the depository in any way;
- the depository may require that those who purchase and sell interests in a global security within its book-entry system use immediately available funds and your bank, broker or other financial institution may require you to do so as well; and
- financial institutions that participate in the depository’s book-entry system and through which an investor holds its interest in the global securities, directly or indirectly, may also have their own policies affecting payments, deliveries, transfers, exchanges, notices and other matters relating to the securities, and those policies may change from time to time. For example, if you hold an interest in a global security through Euroclear, Clearstream or CDS, when DTC is the depository, Euroclear, Clearstream or CDS, as applicable, may require those who purchase and sell interests in that security through them to use immediately available funds and comply with other policies and procedures, including deadlines for giving instructions as to transactions that are to be effected on a particular day. There may be more than one financial intermediary in the chain of ownership for an investor. We do not monitor and are not responsible for the policies or actions or records of ownership interests of any of those intermediaries.

Holder's Option to Obtain a Non-Global Security; Special Situations When a Global Security Will Be Terminated. If we issue any series of securities in book-entry form but we choose to give the beneficial owners of that series the right to obtain non-global securities, any beneficial owner entitled to obtain non-global securities may do so by following the applicable procedures of the depositary, any transfer agent or registrar for that series and that owner's bank, broker or other financial institution through which that owner holds its beneficial interest in the securities. If you are entitled to request a non-global certificate and wish to do so, you will need to allow sufficient lead time to enable us or our agent to prepare the requested certificate.

In addition, in a few special situations described below, a global security will be terminated and interests in it will be exchanged for certificates in non-global form representing the securities it represented. After that exchange, the choice of whether to hold the securities directly or in street name will be up to the investor. Investors must consult their own banks, brokers or other financial institutions to find out how to have their interests in a global security transferred on termination to their own names, so that they will be holders. We have described the rights of holders and street name investors above under “— Who Is the Registered Owner of a Security?”.

The special situations for termination of a global security are as follows:

- if the depositary notifies us that it is unwilling, unable or no longer qualified to continue as depositary for that global security and we do not appoint another institution to act as depositary within 60 days;
- if we notify the trustee that we wish to terminate that global security; or
- if an event of default has occurred with regard to these debt securities and has not been cured or waived.

DTC's current rules provide that it would notify its participants of a request by us to terminate a global security, but will withdraw beneficial interests from the global security only at the request of each DTC participant.

If a global security is terminated, only the depositary, and neither we nor the trustee for any debt securities is responsible for deciding the names of the institutions in whose names the securities represented by the global security will be registered and, therefore, who will be the registered holders of those securities.

Considerations Relating to DTC

DTC has informed us as follows:

DTC is a limited-purpose trust company organized under the New York Banking Law, a “banking organization” within the meaning of the New York Banking Law, a member of the Federal Reserve System, a “clearing corporation” within the meaning of the New York Uniform Commercial Code and a “clearing agency” registered pursuant to the provisions of Section 17A of the Exchange Act. DTC holds securities that DTC participants deposit with DTC. DTC also facilitates the post-trade settlement among DTC participants of sales and other securities transactions in deposited securities, through electronic computerized book-entry transfers and pledges between DTC participants' accounts. This eliminates the need for physical movement of securities certificates. DTC participants include both U.S. and non-U.S. securities brokers and dealers, banks, trust companies, clearing corporations, and certain other organizations. DTC is a wholly owned subsidiary of The Depository Trust & Clearing Corporation (“DTCC”). DTCC is the holding company for DTC, National Securities Clearing Corporation and Fixed Income Clearing Corporation, all of which are registered clearing agencies. DTCC is owned by the users of its regulated subsidiaries. Access to the DTC system is also available to others such as both U.S. and non-U.S. brokers and dealers, banks, trust companies and clearing corporations that clear through or maintain a custodial relationship with a DTC participant, either directly or indirectly. The rules applicable to DTC and DTC participants are on file with the SEC.

Purchases of securities within the DTC system must be made by or through DTC participants, which will receive a credit for the securities on DTC's records. The ownership interest of each actual acquirer of new securities

is in turn to be recorded on the direct and indirect participants' records. Beneficial owners will not receive written confirmation from DTC of their purchase. Beneficial owners are, however, expected to receive written confirmations providing details of the transaction, as well as periodic statements of their holdings, from the direct or indirect participant through which the beneficial owner entered into the transaction. Transfers of ownership interests in the securities are to be accomplished by entries made on the books of direct and indirect participants acting on behalf of beneficial owners. Beneficial owners will not receive certificates representing their ownership interests in securities, except in the event that use of the book-entry system for the securities is discontinued.

To facilitate subsequent transfers, the securities deposited by direct participants with DTC will be registered in the name of DTC's partnership nominee, Cede & Co., or such other name as may be requested by an authorized representative of DTC. The deposit of securities with DTC and their registration in the name of Cede & Co. or such other nominee will not effect any change in beneficial ownership. DTC has no knowledge of the actual beneficial owners of the securities; DTC's records reflect only the identity of the direct participants to whose accounts the securities are credited, which may or may not be the beneficial owners. The participants are responsible for keeping account of their holdings on behalf of their customers.

Conveyance of notices and other communications by DTC to its direct participants, by its direct participants to indirect participants, and by its direct and indirect participants to beneficial owners of the securities will be governed by arrangements among them, respectively, subject to any statutory or regulatory requirements as may be in effect from time to time.

Redemption notices will be sent to DTC. If less than all of the securities are being redeemed, DTC will determine the amount of the interest of each direct participant to be redeemed in accordance with its then current procedures.

Neither DTC nor Cede & Co. (nor any other DTC nominee) will consent or vote with respect to securities unless authorized by a direct participant in accordance with DTC's procedures. Under its usual procedures, DTC mails an omnibus proxy to the issuer as soon as possible after the record date. The omnibus proxy assigns Cede & Co.'s consenting or voting rights to those direct participants to whose accounts such securities are credited on the record date (identified in a listing attached to the omnibus proxy).

Distribution payments on the securities will be made to Cede & Co., or such other nominee as may be requested by an authorized representative of DTC. DTC's usual practice is to credit direct participants' accounts upon DTC's receipt of funds and corresponding detail information from the issuer or agent on the relevant payment date in accordance with their respective holdings shown on DTC's records. Payments by DTC participants to beneficial owners will be governed by standing instructions and customary practices and will be the responsibility of such participants and not of DTC, the agent or the issuer, subject to any statutory or regulatory requirements as may be in effect from time to time. Payment of distributions to Cede & Co. (or other nominee as may be requested by an authorized representative of DTC) is the responsibility of the issuer or agent, disbursements of such payments to direct participants are the responsibility of DTC, and disbursements of such payments to the beneficial owners are the responsibility of direct and indirect participants.

DTC may discontinue providing its services as depository with respect to the securities at any time by giving reasonable notice to the issuer or agent. Under such circumstances, in the event that a successor depository is not obtained, security certificates are required to be printed and delivered.

The Bank may decide to discontinue use of the system of book-entry-only transfers through DTC (or a successor securities depository). In that event, security certificates will be printed and delivered to DTC.

The information in this section concerning DTC and DTC's book-entry system has been obtained from sources that we believe to be reliable, but we take no responsibility for the accuracy thereof.

Considerations Relating to Euroclear and Clearstream

Euroclear and Clearstream are securities clearing systems in Europe. Both systems clear and settle securities transactions between their participants through electronic, book-entry delivery of securities against payment.

Euroclear and Clearstream may be depositaries for a global security. In addition, if DTC is the depository for a global security, Euroclear and Clearstream may hold interests in the global security as participants in DTC.

As long as any global security is held by Euroclear or Clearstream, as depository, you may hold an interest in the global security only through an organization that participates, directly or indirectly, in Euroclear or Clearstream. If Euroclear or Clearstream is the depository for a global security and there is no depository in the United States, you will not be able to hold interests in that global security through any securities clearance system in the United States.

Payments, deliveries, transfers, exchanges, notices and other matters relating to the securities made through Euroclear or Clearstream must comply with the rules and procedures of those systems. Those clearing systems could change their rules and procedures at any time. We have no control over those systems or their participants, and we take no responsibility for their activities. Transactions between participants in Euroclear or Clearstream, on one hand, and participants in DTC, on the other hand, when DTC is the depository, would also be subject to DTC's rules and procedures.

Special Timing Considerations Relating to Transactions in Euroclear and Clearstream. Investors will be able to make and receive through Euroclear and Clearstream payments, deliveries, transfers, exchanges, notices and other transactions involving any securities held through those clearing systems only on days when those systems are open for business. These clearing systems may not be open for business on days when banks, brokers and other institutions are open for business in the United States.

In addition, because of time-zone differences, U.S. investors who hold their interests in the securities through these clearing systems and wish to transfer their interests, or to receive or make a payment or delivery or exercise any other right with respect to their interests, on a particular day may find that the transaction will not be effected until the next business day in Luxembourg or Brussels, as applicable. Thus, investors who wish to exercise rights that expire on a particular day may need to act before the expiration date. In addition, investors who hold their interests through both DTC and Euroclear or Clearstream may need to make special arrangements to finance any purchases or sales of their interests between the U.S. and European clearing systems, and those transactions may settle later than would be the case for transactions within one clearing system.

Considerations Relating to CDS

The information concerning CDS has been taken from, or is based upon, publicly available documents. CDS is Canada's national securities clearing and depository services organization. Functioning as a service utility for the Canadian financial community, CDS provides a variety of computer automated services for financial institutions and investment dealers active in Canadian and international capital markets. CDS participants ("CDS Participants") include banks, investment dealers and trust companies, and may include underwriters which participate in the distribution of the securities. Indirect access to CDS is available to other organizations that clear through or maintain a custodial relationship with a CDS Participant. Payments, deliveries, transfers, exchanges, notices and other actions relating to the securities made through CDS may only be processed through CDS Participants and must be completed in accordance with existing CDS rules and procedures. CDS operates in Montreal, Toronto, Calgary and Vancouver to centralize securities clearing functions through a central securities depository.

CDS is wholly owned by The Canadian Depository for Securities Limited, a private corporation owned by TMX Group Limited, a reporting issuer in Canada. CDS is the clearing house for equity trading on both the Toronto and Montreal stock exchanges and also clears a substantial volume of "over-the-counter" trading in equities and bonds.

CDS may be a depository for a global security. In addition, if DTC is the depository for a global security, CDS may, on behalf of CDS Participants, hold an interest in the global security.

As long as any global security is held by CDS, as depository, you may hold an interest in the global security only through an organization that participates, directly or indirectly, in CDS. If CDS is the depository for a global security and there is no depository in the United States, you will not be able to hold interests in that global security through any securities clearance system in the United States.

CDS could change its rules and procedures at any time. We have no control over CDS or its participants, and we take no responsibility for its activities. Transactions between participants in CDS, on one hand, and participants in DTC, on the other hand, when DTC is the depositary, would also be subject to DTC's rules and procedures.

The Trustee

The Bank of New York Mellon, as successor to the corporate trust business of JPMorgan Chase Bank, N.A., serves as the trustee for our senior debt securities. The Bank of New York Mellon also serves as the trustee for our subordinated debt securities. Consequently, if an actual or potential event of default occurs with respect to any of these securities, the trustee may be considered to have a conflicting interest for purposes of the Trust Indenture Act of 1939. In that case, the trustee may be required to resign under one or both of the indentures, and we would be required to appoint a successor trustee. For this purpose, a "potential" event of default means an event that would be an event of default if the requirements for giving us default notice or for the default having to exist for a specific period of time were disregarded. From time to time, we and our affiliates have conducted commercial banking, financial and other transactions with The Bank of New York Mellon and its respective affiliates for which fees have been paid in the ordinary course of business. We may conduct these types of transactions with each other in the future and receive fees for services performed.

DESCRIPTION OF COMMON SHARES

Set forth below is a summary of the material terms of the Bank's common shares and certain provisions of the Bank Act (Canada) and the Bank's amended and restated by-laws as they relate to the Bank's common shares. The following summary is not complete and is qualified in its entirety by the Bank Act (Canada), the Bank's amended and restated by-laws and the actual terms and conditions of such shares.

Authorized Share Capital

The Bank's authorized share capital consists of an unlimited number of common shares without nominal or par value and an unlimited number of first preferred shares and second preferred shares without nominal or par value, issuable in series, which classes may be issued for a maximum consideration of C\$20 billion and C\$5 billion, respectively. As of November 27, 2015, the Bank had issued and outstanding 1,485,401,829 common shares and 275,000 first preferred shares. There are no second preferred shares currently outstanding.

Voting, Dividend and Winding Up Rights of Holders of Common Shares

The holders of the Bank's common shares are entitled to vote at all meetings of shareholders, except meetings at which only holders of a specified class, other than common shares, or series of shares are entitled to vote. The holders of common shares are entitled to receive dividends as and when declared by the board of directors, subject to the preference of the preferred shares. After payment to the holders of the preferred shares of the amount or amounts to which they may be entitled, and after payment of all outstanding debts, the holders of the common shares will be entitled to receive any remaining property upon liquidation, dissolution or winding-up of the Bank.

Limitations Affecting Holders of Common Shares

The *Bank Act* (Canada) contains restrictions (which are subject to any orders that may be issued by the Governor in Council of Canada) on the issue, transfer, acquisition, beneficial ownership and voting of all shares of a chartered bank. The following is a summary of such restrictions.

Subject to certain exceptions contained in the *Bank Act* (Canada), no person may be a major shareholder of a bank having equity of \$12 billion or more (which includes the Bank). A person is a major shareholder if:

- (a) the aggregate of the shares of any class of voting shares of the bank beneficially owned by that person, by entities controlled by that person and by any person associated or acting jointly or in concert with that person is more than 20% of that class of voting shares, or
- (b) the aggregate of shares of any class of non-voting shares of the bank beneficially owned by that person, by entities controlled by that person and by any person associated or acting jointly or in concert with that person is more than 30% of that class of non-voting shares.

Additionally, no person may have a significant interest in any class of shares of a bank (including the Bank) unless the person first receives the approval of the Minister of Finance of Canada. For purposes of the *Bank Act* (Canada), a person has a significant interest in a class of shares of a bank where the aggregate of any shares of the class beneficially owned by that person, by entities controlled by that person and by any person associated or acting jointly or in concert with that person exceeds 10% of all of the outstanding shares of that class of shares of such bank.

In addition, the *Bank Act* (Canada) prohibits a bank from purchasing or redeeming any of its shares or paying any dividends if there are reasonable grounds for believing the bank is, or the payment would cause the bank to be, in contravention of the *Bank Act* (Canada) requirement to maintain, in relation to its operations, adequate capital and appropriate forms of liquidity and to comply with any regulations or directions of the Superintendent in relation thereto.

Subject to any orders that may be issued by the Governor in Council of Canada, the *Bank Act* (Canada) also prohibits the registration of a transfer or issue of any shares of a Canadian bank to any government or governmental agency of Canada or any province of Canada, or to any government of any foreign country, or any political subdivision, or agency of any foreign country. Under the *Bank Act* (Canada), the Bank cannot redeem or purchase any shares for cancellation unless the prior consent of the Superintendent has been obtained.

Amendments to the Rights, Privileges, Restrictions and Conditions of Common Shares

Under the *Bank Act* (Canada), the rights of holders of the Bank's shares can be changed by the board of directors of the Bank by making, amending or repealing the by-laws of the Bank. The board of directors of the Bank must submit such a by-law, or amendment to or repeal of a by-law, to the shareholders of the Bank in accordance with the procedures of the *Bank Act* (Canada) and the by-laws of the Bank, and the shareholders must approve the by-law, amendment to or repeal of the by-law, by special resolution to be effective. Under the *Bank Act* (Canada), a special resolution is a resolution passed by not less than two-thirds of the votes cast by or on behalf of the shareholders who voted in respect of that resolution or signed by all the shareholders entitled to vote on that resolution. In some circumstances, the *Bank Act* (Canada) mandates that holders of shares of a class or a series are entitled to vote separately as a class or series on a proposal to amend the by-laws of the Bank.

TAX CONSEQUENCES

UNITED STATES TAXATION

This section describes the material United States federal income tax consequences of owning and disposing of debt securities that we will offer. However, this section is only applicable to debt securities that are not subject to Non-Viability Contingent Capital Provisions of the type discussed above under “Special Provisions Related to the Subordinated Debt Securities.” The tax treatment of debt securities that are subject to such a provision will be discussed in the applicable prospectus supplement or pricing supplement.

This section is the opinion of Sullivan & Cromwell LLP, our United States federal income tax counsel. It applies to you only if you acquire debt securities in an offering and you hold debt securities as capital assets for tax purposes. This section does not apply to persons other than U.S. holders (as defined below). The ownership of debt securities that pay interest from sources within the United States may give rise to material United States federal income tax consequences to persons other than U.S. holders. If a particular offering of debt securities is expected to pay interest from sources within the United States, the applicable supplement will specify that fact and may discuss the material United States federal income tax consequences to persons other than U.S. holders of owning such debt securities. This section does not apply to you if you are a member of a special class of holders subject to special rules, including:

- a dealer in securities or currencies;
- a trader in securities that elects to use a mark-to-market method of accounting for your securities holdings;
- a tax-exempt organization;
- a life insurance company;
- a person that owns debt securities that are a hedge or that are hedged against interest rate or currency risks;
- a person that holds debt securities as part of a straddle or conversion transaction;
- a person that purchases or sells debt securities as part of a wash sale for tax purposes;
- a person whose functional currency is not the U.S. dollar;
- a person subject to the alternative minimum tax; or
- a bank.

This section is based on the Internal Revenue Code of 1986, as amended (the “Internal Revenue Code”), its legislative history, existing and proposed regulations, published rulings and court decisions, as well as on the income tax treaty between the United States of America and Canada. These laws are subject to change, possibly on a retroactive basis.

If a partnership holds the debt securities, the United States federal income tax treatment of a partner will generally depend on the status of the partner and the tax treatment of the partnership. A partner in a partnership holding the debt securities should consult its tax advisor with regard to the United States federal income tax treatment of an investment in the debt securities.

You are urged to consult your own tax advisor regarding the United States federal, state and local and other tax consequences of owning and disposing of debt securities offered under the prospectus in your particular circumstances.

This section describes the material United States federal income tax consequences of owning debt securities to a U.S. holder. You are a U.S. holder if you are a beneficial owner of debt securities and you are:

- a citizen or resident of the United States;
- a domestic corporation, or other entity taxable as a corporation for United States federal income tax purposes, created or organized in or under the laws of the United States or of any subdivision thereof;
- an estate whose income is subject to United States federal income tax regardless of its source; or
- a trust if a United States court can exercise primary supervision over the trust's administration and one or more United States persons are authorized to control all substantial decisions of the trust.

This section deals only with debt securities that are due to mature 30 years or less from the date on which they are issued. The United States federal income tax consequences of owning debt securities with a term of more than 30 years, indexed notes that are not treated as debt for tax purposes or that are treated as contingent payment debt obligations for tax purposes will be discussed in the applicable supplement and will not, unless otherwise specified in the applicable supplement, be taxed in accordance with the discussion in this section.

Payments of Interest

Except as described below in the case of interest on a discount debt security that is not qualified stated interest, each as defined below under “— Original Issue Discount — General,” you will be taxed on any interest on your debt securities, whether payable in U.S. dollars or a foreign currency, including a composite currency or basket of currencies other than U.S. dollars, as ordinary income at the time you receive the interest or when it accrues, depending on your method of accounting for United States tax purposes.

Unless the applicable supplement states otherwise, debt securities will, for United States federal income tax purposes, be accounted for as being issued by the Bank or one of its non-U.S. affiliates, rather than by a U.S. branch or subsidiary. Assuming this treatment is respected, interest paid by us on such debt securities and original issue discount, if any, included in income with respect to such debt securities (as described below under “— Original Issue Discount”) will generally be income from sources outside the United States, subject to the rules regarding the foreign tax credit allowable to a U.S. holder. Under the foreign tax credit rules, interest and original issue discount included in income from sources outside the United States will depending on your circumstances, be either “passive” or “general” income for purposes of computing the foreign tax credit. If, on the contrary, a particular offering of debt securities is expected to pay interest from sources within the United States, the applicable supplement will state that fact. Interest from sources within the United States is not foreign source income for purposes of computing the foreign tax credit.

Cash Basis Taxpayers. If you are a taxpayer that uses the cash receipts and disbursements method of accounting for tax purposes and you receive an interest payment that is denominated in, or determined by reference to, a foreign currency, you would recognize income equal to the U.S. dollar value of the interest payment, based on the exchange rate in effect on the date of receipt, regardless of whether you actually convert the payment into U.S. dollars.

Accrual Basis Taxpayers. If you are a taxpayer that uses an accrual method of accounting for tax purposes, you may determine the amount of income that you recognize with respect to an interest payment denominated in, or determined by reference to, a foreign currency by using one of two methods. Under the first method, you would determine the amount of income accrued based on the average exchange rate in effect during the interest accrual period or, with respect to an accrual period that spans two taxable years, that part of the period within the taxable year.

If you elect the second method, you would determine the amount of income accrued on the basis of the exchange rate in effect on the last day of the accrual period, or, in the case of an accrual period that spans two

taxable years, the exchange rate in effect on the last day of the part of the period within the taxable year. Additionally, under this second method, if you receive a payment of interest within five business days of the last day of your accrual period or taxable year, you may instead translate the interest accrued into U.S. dollars at the exchange rate in effect on the day that you actually receive the interest payment. If you elect the second method, it would apply to all foreign currency debt instruments that you hold at the beginning of the first taxable year to which the election applies and to all foreign currency debt instruments that you subsequently acquire. You may not revoke this election without the consent of the IRS.

When you actually receive an interest payment, including a payment attributable to accrued but unpaid interest upon the sale or retirement of your debt security, denominated in, or determined by reference to, a foreign currency for which you accrued an amount of income, you will recognize ordinary income or loss measured by the difference, if any, between the exchange rate that you used to accrue interest income and the exchange rate in effect on the date of receipt, regardless of whether you actually convert the payment into U.S. dollars.

Original Issue Discount

General. If you own a debt security, other than a debt security with a term of one year or less, it would be treated as a discount debt security issued at an original issue discount (“OID”) if the amount by which the debt security’s stated redemption price at maturity exceeds its issue price equals or is more than a *de minimis* amount. Generally, a debt security’s issue price will be the first price at which a substantial amount of debt securities included in the issue of which the debt security is a part is sold to persons other than bond houses, brokers, or similar persons or organizations acting in the capacity of underwriters, placement agents, or wholesalers. A debt security’s stated redemption price at maturity is the total of all payments provided by the debt security that are not payments of qualified stated interest. Generally, an interest payment on a debt security is qualified stated interest if it is one of a series of stated interest payments on a debt security that are unconditionally payable in cash or property, other than debt instruments of the Bank, at least annually at a single fixed rate, with certain exceptions for lower rates paid during some periods, applied to the outstanding principal amount of the debt security. There are special rules for variable rate debt securities that are discussed under “— Variable Rate Debt Securities”.

In general, your debt security is not a discount debt security if the amount by which its stated redemption price at maturity exceeds its issue price is less than the *de minimis* amount of 1/4 of 1 percent of its stated redemption price at maturity multiplied by the number of complete years to its maturity. Your debt security will have *de minimis* original issue discount if the amount of the excess is less than the *de minimis* amount. If your debt security has *de minimis* original issue discount, you would include the *de minimis* amount in income as stated principal payments are made on the debt security, unless you make the election described below under “— Election to Treat All Interest as Original Issue Discount”. You can determine the includible amount with respect to each such payment by multiplying the total amount of your debt security’s *de minimis* original issue discount by a fraction equal to:

- the amount of the principal payment made

divided by:

- the stated principal amount of the debt security.

Generally, if your discount debt security matures more than one year from its date of issue, you would include OID in income before you receive cash attributable to that income. The amount of OID that you would include in income is calculated using a constant-yield method, and generally you would include increasingly greater amounts of OID in income over the life of your debt security. More specifically, you can calculate the amount of OID that you would include in income by adding the daily portions of OID with respect to your discount debt security for each day during the taxable year or portion of the taxable year that you hold your discount debt security. You can determine the daily portion by allocating to each day in any accrual period a pro rata portion of the OID allocable to that accrual period. You may select an accrual period of any length with respect to your discount debt security and you may vary the length of each accrual period over the term of your discount debt security. However,

no accrual period may be longer than one year and each scheduled payment of interest or principal on the discount debt security must occur on either the first or final day of an accrual period.

You can determine the amount of OID allocable to an accrual period by:

- multiplying your discount debt security's adjusted issue price at the beginning of the accrual period by your debt security's yield to maturity; and then
- subtracting from this figure the sum of the payments of qualified stated interest on your debt security allocable to the accrual period.

You must determine the discount debt security's yield to maturity on the basis of compounding at the close of each accrual period and adjusting for the length of each accrual period. Further, you determine your discount debt security's adjusted issue price at the beginning of any accrual period by:

- adding your discount debt security's issue price and any accrued OID for each prior accrual period; and then
- subtracting any payments previously made on your discount debt security that were not qualified stated interest payments.

If an interval between payments of qualified stated interest on your discount debt security contains more than one accrual period, then, when you determine the amount of OID allocable to an accrual period, you would allocate the amount of qualified stated interest payable at the end of the interval, including any qualified stated interest that is payable on the first day of the accrual period immediately following the interval, pro rata to each accrual period in the interval based on their relative lengths. In addition, you would increase the adjusted issue price at the beginning of each accrual period in the interval by the amount of any qualified stated interest that has accrued prior to the first day of the accrual period but that is not payable until the end of the interval. You may compute the amount of OID allocable to an initial short accrual period by using any reasonable method if all other accrual periods, other than a final short accrual period, are of equal length.

The amount of OID allocable to the final accrual period is equal to the difference between:

- the amount payable at the maturity of your debt security, other than any payment of qualified stated interest; and
- your debt security's adjusted issue price as of the beginning of the final accrual period.

Acquisition Premium. If you purchase your debt security for an amount that is less than or equal to the sum of all amounts, other than qualified stated interest, payable on your debt security after the purchase date but is greater than the amount of your debt security's adjusted issue price, as determined above under "— General", the excess is acquisition premium. If you do not make the election described below under "— Election to Treat All Interest as Original Issue Discount", then you would reduce the daily portions of OID by a fraction equal to:

- the excess of your adjusted basis in the debt security immediately after purchase over the adjusted issue price of the debt security

divided by:

- the excess of the sum of all amounts payable, other than qualified stated interest, on the debt security after the purchase date over the debt security's adjusted issue price.

Pre-Issuance Accrued Interest. An election may be made to decrease the issue price of your debt security by the amount of pre-issuance accrued interest if:

- a portion of the initial purchase price of your debt security is attributable to pre-issuance accrued interest;
- the first stated interest payment on your debt security is to be made within one year of your debt security's issue date; and
- the payment would equal or exceed the amount of pre-issuance accrued interest.

If this election is made, a portion of the first stated interest payment will be treated as a return of the excluded pre-issuance accrued interest and not as an amount payable on your debt security.

Debt Securities Subject to Contingencies, Including Optional Redemption. Your debt security is subject to a contingency if it provides for an alternative payment schedule or schedules applicable upon the occurrence of a contingency or contingencies, other than a remote or incidental contingency, whether such contingency relates to payments of interest or of principal. In such a case, you would determine the yield and maturity of your debt security by assuming that the payments would be made according to the payment schedule most likely to occur if:

- the timing and amounts of the payments that comprise each payment schedule are known as of the issue date; and
- one of such schedules is significantly more likely than not to occur.

If there is no single payment schedule that is significantly more likely than not to occur, other than because of a mandatory sinking fund, you would include income on your debt security in accordance with the general rules that govern contingent payment obligations. These rules will be discussed in the applicable supplement.

Notwithstanding the general rules for determining yield and maturity, if your debt security is subject to contingencies, and either you or we have an unconditional option or options that, if exercised, would require payments to be made on the debt security under an alternative payment schedule or schedules, then:

- in the case of an option or options that we may exercise, we would be deemed to exercise or not exercise an option or combination of options in the manner that minimizes the yield on your debt security; and
- in the case of an option or options that you may exercise, you would be deemed to exercise or not exercise an option or combination of options in the manner that maximizes the yield on your debt security.

If both you and we hold options described in the preceding sentence, those rules would apply to each option in the order in which they may be exercised. You may determine the yield on your debt security for the purposes of those calculations by using any date on which your debt security may be redeemed or repurchased as the maturity date and the amount payable on the date that you chose in accordance with the terms of your debt security as the principal amount payable at maturity.

If a contingency, including the exercise of an option, actually occurs or does not occur contrary to an assumption made according to the above rules then, except to the extent that a portion of your debt security is repaid as a result of this change in circumstances and solely to determine the amount and accrual of OID, you would redetermine the yield and maturity of your debt security by treating your debt security as having been retired and reissued on the date of the change in circumstances for an amount equal to your debt security's adjusted issue price on that date.

Election to Treat All Interest as Original Issue Discount. You may elect to include in gross income all interest that accrues on your debt security using the constant-yield method described above under “— General”, with the modifications described below. For purposes of this election, interest will include stated interest, OID, *de minimis* original issue discount, market discount, *de minimis* market discount and unstated interest, as adjusted by

any amortizable bond premium, described below under “— Debt Securities Purchased at a Premium”, or acquisition premium.

If you make this election for your debt security, then, when you apply the constant-yield method:

- the issue price of your debt security would equal your cost;
- the issue date of your debt security would be the date you acquired it; and
- no payments on your debt security would be treated as payments of qualified stated interest.

Generally, this election will apply only to the debt security for which you make it; however, if the debt security has amortizable bond premium, you would be deemed to have made an election to apply amortizable bond premium against interest for all debt instruments with amortizable bond premium, other than debt instruments the interest on which is excludible from gross income, that you hold as of the beginning of the taxable year to which the election applies or any taxable year thereafter. Additionally, if you make this election for a market discount note, you would be treated as having made the election discussed below under “— Market Discount” to include market discount in income currently over the life of all debt instruments having market discount that you acquire on or after the first day of the first taxable year to which the election applies. You may not revoke any election to apply the constant-yield method to all interest on a debt security or the deemed elections with respect to amortizable bond premium or market discount debt securities without the consent of the IRS.

Variable Rate Debt Securities. Your debt security would be a variable rate debt security if:

- your debt security’s issue price does not exceed the total noncontingent principal payments by more than the lesser of:
 - 0.015 multiplied by the product of the total noncontingent principal payments and the number of complete years to maturity from the issue date; or
 - 15 percent of the total noncontingent principal payments; and
- your debt security provides for stated interest, compounded or paid at least annually, only at:
 - one or more qualified floating rates;
 - a single fixed rate and one or more qualified floating rates;
 - a single objective rate; or
 - a single fixed rate and a single objective rate that is a qualified inverse floating rate; and
- the value of the rate on any date during the term of your debt security is set no earlier than three months prior to the first day on which that value is in effect and no later than one year following that first day

Your debt security would have a variable rate that is a qualified floating rate if:

- variations in the value of the rate can reasonably be expected to measure contemporaneous variations in the cost of newly borrowed funds in the currency in which your debt security is denominated; or
- the rate is equal to such a rate either:

- multiplied by a fixed multiple that is greater than 0.65 but not more than 1.35; or
- multiplied by a fixed multiple greater than 0.65 but not more than 1.35, increased or decreased by a fixed rate.

If your debt security provides for two or more qualified floating rates that are within 0.25 percentage points of each other on the issue date or can reasonably be expected to have approximately the same values throughout the term of the debt security, the qualified floating rates together constitute a single qualified floating rate.

Your debt security would not have a qualified floating rate, however, if the rate is subject to certain restrictions (including caps, floors, governors, or other similar restrictions) unless such restrictions are fixed throughout the term of the debt security or are not reasonably expected to significantly affect the yield on the debt security as the case may be.

Your debt security would have a variable rate that is a single objective rate if:

- the rate is not a qualified floating rate; and
- the rate is determined using a single, fixed formula that is based on objective financial or economic information that is not within the control of or unique to the circumstances of the Bank or a related party.

Your debt security would not have a variable rate that is an objective rate, however, if it is reasonably expected that the average value of the rate during the first half of your debt security's term would be either significantly less than or significantly greater than the average value of the rate during the final half of your debt security's term.

An objective rate as described above is a qualified inverse floating rate if:

- the rate is equal to a fixed rate minus a qualified floating rate; and
- the variations in the rate can reasonably be expected to inversely reflect contemporaneous variations in the cost of newly borrowed funds.

Your debt security would also have a single qualified floating rate or an objective rate if interest on your debt security is stated at a fixed rate for an initial period of one year or less followed by either a qualified floating rate or an objective rate for a subsequent period, and either:

- the fixed rate and the qualified floating rate or objective rate have values on the issue date of the debt security that do not differ by more than 0.25 percentage points; or
- the value of the qualified floating rate or objective rate is intended to approximate the fixed rate.

In general, if your variable rate debt security provides for stated interest at a single qualified floating rate or objective rate, or one of those rates after a single fixed rate for an initial period provided certain requirements are satisfied, all stated interest on your debt security is qualified stated interest. In this case, the amount of OID, if any, is determined by using, in the case of a qualified floating rate or qualified inverse floating rate, the value as of the issue date of the qualified floating rate or qualified inverse floating rate, or, for any other objective rate, a fixed rate that reflects the yield reasonably expected for your debt security.

If your variable rate debt security does not provide for stated interest at a single qualified floating rate or a single objective rate, and also does not provide for interest payable at a fixed rate other than a single fixed rate for an initial period, you generally would determine the interest and OID accruals on your debt security by:

- determining a fixed rate substitute for each variable rate provided under your variable rate debt security;
- constructing the equivalent fixed rate debt instrument, using the fixed rate substitute described above;
- determining the amount of qualified stated interest and OID with respect to the equivalent fixed rate debt instrument; and
- adjusting for actual variable rates during the applicable accrual period.

When you determine the fixed rate substitute for each variable rate provided under the variable rate debt security, you generally will use the value of each variable rate as of the issue date or, for an objective rate that is not a qualified inverse floating rate, a rate that reflects the reasonably expected yield on your debt security.

If your variable rate debt security provides for stated interest either at one or more qualified floating rates or at a qualified inverse floating rate and also provides for stated interest at a single fixed rate other than at a single fixed rate for an initial period, you generally would determine interest and OID accruals by using the method described in the previous paragraph. However, your variable rate debt security would be treated, for purposes of the first three steps of the determination, as if your debt security had provided for a qualified floating rate, or a qualified inverse floating rate, rather than the fixed rate. The qualified floating rate, or qualified inverse floating rate, that replaces the fixed rate must be such that the fair market value of your variable rate debt security as of the issue date approximates the fair market value of an otherwise identical debt instrument that provides for the qualified floating rate, or qualified inverse floating rate, rather than the fixed rate.

Short-Term Debt Securities. In general, if you are an individual or other cash basis U.S. holder of a short-term debt security, you are not required to accrue OID for United States federal income tax purposes unless you elect to do so (although it is possible that you may be required to include any stated interest in income as you receive it). If you are an accrual basis taxpayer, a taxpayer in a special class, including, but not limited to, a regulated investment company, common trust fund, or a certain type of pass-through entity, or a cash basis taxpayer who so elects, you would be required to accrue OID on short-term debt securities on either a straight-line basis or under the constant-yield method, based on daily compounding. If you are not required and do not elect to include OID in income currently, any gain you realize on the sale or retirement of your short-term debt security would be ordinary income to the extent of the accrued OID, which will be determined on a straight-line basis unless you make an election to accrue the OID under the constant-yield method, through the date of sale or retirement. However, if you are not required and do not elect to accrue OID on your short-term debt securities, you would be required to defer deductions for interest on borrowings allocable to your short-term debt securities in an amount not exceeding the deferred income until the deferred income is realized.

When you determine the amount of OID subject to these rules, you must include all interest payments on your short-term debt security, including stated interest, in your short-term debt security's stated redemption price at maturity.

Foreign Currency Discount Notes. If your discount note is denominated in, or determined by reference to, a foreign currency, you would determine OID for any accrual period on your discount note in the foreign currency and then translate the amount of OID into U.S. dollars in the same manner as stated interest accrued by an accrual basis U.S. holder, as described under "— U.S. Holders — Payments of Interest". You may recognize ordinary income or loss when you receive an amount attributable to OID in connection with a payment of interest or the sale or retirement of your note.

Market Discount

You would be treated as if you purchased your debt security, other than a short-term debt security, at a market discount, and your debt security will be a market discount debt security if:

- you purchase your debt security for less than its issue price as determined above under “— Original Issue Discount — General”; and
- the difference between the debt security’s stated redemption price at maturity or, in the case of a discount debt security, the debt security’s revised issue price (i.e., the issue price increased by the amount of accrued OID), and the price you paid for your debt security is equal to or greater than 1/4 of 1 percent of your debt security’s stated redemption price at maturity or revised issue price, respectively, multiplied by the number of complete years to the debt security’s maturity. To determine the revised issue price of your debt security for these purposes, you generally add any OID that has accrued on your debt security to its issue price.

If your debt security’s stated redemption price at maturity or, in the case of a discount debt security, its revised issue price, exceeds the price you paid for the debt security by less than 1/4 of 1 percent multiplied by the number of complete years to the debt security’s maturity, the excess constitutes *de minimis* market discount, and the rules discussed below are not applicable to you.

You must treat any gain you recognize on the maturity or disposition of your market discount debt security as ordinary income to the extent of the accrued market discount on your debt security. Alternatively, you may elect to include market discount in income currently over the life of your debt security. If you make this election, it would apply to all debt instruments with market discount that you acquire on or after the first day of the first taxable year to which the election applies. You may not revoke this election without the consent of the IRS. If you own a market discount debt security and do not make this election, you would generally be required to defer deductions for interest on borrowings allocable to your debt security in an amount not exceeding the accrued market discount on your debt security until the maturity or disposition of your debt security.

If you own a market discount debt security, the market discount would accrue on a straight-line basis unless an election is made to accrue market discount using a constant-yield method. If you make this election, it would apply only to the debt security with respect to which it is made and you may not revoke it. You would, however, not include accrued market discount in income unless you elect to do so as described above.

Debt Securities Purchased at a Premium

If you purchase your debt security for an amount that is in excess of its principal amount (or, in the case of a discount debt security, in excess of its stated redemption price at maturity), you may elect to treat the excess as amortizable bond premium. If you make this election, you would reduce the amount required to be included in your income each year with respect to interest on your debt security by the amount of amortizable bond premium allocable to that year, based on a constant yield method. If your debt security is denominated in, or determined by reference to, a foreign currency, you would compute your amortizable bond premium in units of the foreign currency and your amortizable bond premium would reduce your interest income in units of the foreign currency. Gain or loss recognized that is attributable to changes in exchange rates between the time your amortized bond premium offsets interest income and the time of the acquisition of your debt security is generally taxable as ordinary income or loss. If you make an election to amortize bond premium, it would apply to all debt instruments, other than debt instruments the interest on which is excludible from gross income, that you hold at the beginning of the first taxable year to which the election applies or that you thereafter acquire, and you may not revoke it without the consent of the IRS. See also “— Original Issue Discount — Election to Treat All Interest as Original Issue Discount”.

Purchase, Sale and Retirement of the Debt Securities

Your tax basis in your debt security will generally be the U.S. dollar cost, as defined below, of your debt security adjusted by:

- adding any OID or market discount previously included in income with respect to your debt security; and then

- subtracting any payments on your debt security that are not qualified stated interest payments and any amortizable bond premium applied to reduce interest on your debt security.

If you purchase your debt security with foreign currency, the U.S. dollar cost of your debt security will generally be the U.S. dollar value of the purchase price on the date of purchase. However, if you are a cash basis taxpayer or an accrual basis taxpayer if you so elect and your debt security is traded on an established securities market, as defined in the applicable Treasury regulations, the U.S. dollar cost of your debt security would be the U.S. dollar value of the purchase price on the settlement date of your purchase.

You will generally recognize gain or loss on the sale or retirement of your debt security equal to the difference between the amount you realize on the sale or retirement, excluding any amounts attributable to accrued but unpaid interest (which will be treated as interest payments), and your adjusted tax basis in your debt security. If your debt security is sold or retired for an amount in foreign currency, the amount you realize would be the U.S. dollar value of such amount on the date the debt security is disposed of or retired, except that in the case of a debt security that is traded on an established securities market, as defined in the applicable Treasury regulations, a cash basis taxpayer, or an accrual basis taxpayer that so elects, would determine the amount realized based on the U.S. dollar value of the foreign currency on the settlement date of the sale or retirement.

You will recognize capital gain or loss when you sell or retire your debt security, except to the extent:

- described above under “— Original Issue Discount — Short-Term Debt Securities” or “— Market Discount”; or
- attributable to changes in exchange rates as described below.

Capital gain of a noncorporate U.S. holder is generally taxed at preferential rates where the property is held for more than one year.

You must treat any portion of the gain or loss that you recognize on the sale or retirement of a debt security as ordinary income or loss to the extent attributable to changes in exchange rates. However, you take exchange gain or loss into account only to the extent of the total gain or loss you realize on the transaction.

Exchange of Amounts in other than U.S. Dollars

If you receive foreign currency as interest on your debt security or on the sale or retirement of your debt security, your tax basis in such foreign currency would equal its U.S. dollar value when the interest is received or at the time of the sale or retirement. If you purchase foreign currency, you generally would have a tax basis equal to the U.S. dollar value of such foreign currency on the date of your purchase. If you sell or dispose of foreign currency, including if you use it to purchase debt securities or exchange them for U.S. dollars, any gain or loss recognized generally would be ordinary income or loss.

Medicare Tax

A U.S. holder that is an individual or estate, or a trust that does not fall into a special class of trusts that is exempt from such tax, is subject to a 3.8% tax on the lesser of (1) the U.S. holder’s “net investment income” (or “undistributed net investment income” in the case of an estate or trust) for the relevant taxable year and (2) the excess of the U.S. holder’s modified adjusted gross income for the taxable year over a certain threshold (which in the case of individuals is between \$125,000 and \$250,000, depending on the individual’s circumstances). A holder’s net investment income generally includes its interest income and its net gains from the disposition of debt securities, unless such interest income or net gains are derived in the ordinary course of the conduct of a trade or business (other than a trade or business that consists of certain passive or trading activities). If you are a U.S. holder that is an individual, estate or trust, you are urged to consult your tax advisors regarding the applicability of the Medicare tax to your income and gains in respect of your investment in the debt securities.

Indexed Debt Securities and Exchangeable Debt Securities

The applicable supplement will discuss any special United States federal income tax rules with respect to indexed notes, other debt securities that are subject to the rules governing contingent payment obligations and debt securities exchangeable for stock or securities of the Bank or another entity or entities, into the cash value therefore or into any combination of the above.

Treasury Regulations Requiring Disclosure of Reportable Transactions

Treasury regulations require United States taxpayers to report certain transactions that give rise to a loss in excess of certain thresholds (a “Reportable Transaction”). Under these regulations, if the debt securities are denominated in a foreign currency, a U.S. holder (or a U.S. alien holder that holds the debt securities in connection with a U.S. trade or business) that recognizes a loss with respect to the debt securities that is characterized as an ordinary loss due to changes in currency exchange rates (under any of the rules discussed above) would be required to report the loss on IRS Form 8886 (Reportable Transaction Statement) if the loss exceeds the thresholds set forth in the regulations. For individuals and trusts, this loss threshold is \$50,000 in any single taxable year. For other types of taxpayers and other types of losses, the thresholds are higher. You should consult with your tax advisor regarding any tax filing and reporting obligations that may apply in connection with acquiring, owning and disposing of debt securities.

Information With Respect to Foreign Financial Assets

A U.S. holder who, during any taxable year, holds any interest in “specified foreign financial assets” with an aggregate value in excess of \$50,000 (and in some circumstances, a higher threshold) may be required to file an information report with respect to such assets with his or her tax returns. “Specified foreign financial assets” may include financial accounts maintained by foreign financial institutions, as well as any of the following, but only if they are held for investment and not held in accounts maintained by financial institutions: (i) stocks and securities issued by non-United States persons, (ii) financial instruments and contracts that have non-United States issuers or counterparties, and (iii) interests in foreign entities. Holders are urged to consult their tax advisors regarding the application of this reporting requirement to their ownership of the debt securities.

Information Reporting and Backup Withholding

If you are a noncorporate U.S. holder and not otherwise an exempt recipient, information reporting requirements, on IRS Form 1099, generally would apply to:

- all payments of principal, any premium and interest on a debt security within the United States, including payments made by wire transfer from outside the United States to an account you maintain in the United States, and the accrual of OID on a discount debt security. In addition, we and other payors are required to report to the IRS any payment of proceeds of the sale of your debt security before maturity within the United States

Additionally, backup withholding would apply to such payments, including the accrual of OID on a discount debt security, if you are a noncorporate U.S. holder that:

- fails to provide an accurate taxpayer identification number, or is notified by the IRS that you have failed to report all interest and dividends required to be shown on your federal income tax returns, or in certain circumstances, fails to comply with applicable certification requirements.

Payment of the proceeds from the sale of a debt security effected at a foreign office of a broker generally will not be subject to information reporting or backup withholding. However, a sale of a debt security that is effected at a foreign office of a broker would generally be subject to information reporting and backup withholding if:

- the proceeds are transferred to an account maintained by you in the United States;
- the payment of proceeds or the confirmation of the sale is mailed to you at a United States address; or

- the sale has some other specified connection with the United States as provided in U.S. Treasury regulations.

In addition, a sale of a debt security effected at a foreign office of a broker would generally be subject to information reporting if the broker is:

- a United States person;
- a controlled foreign corporation for United States tax purposes;
- a foreign person 50% or more of whose gross income is effectively connected with the conduct of a United States trade or business for a specified three-year period; or
- a foreign partnership, if at any time during its tax year:
 - one or more of its partners are “U.S. persons”, as defined in U.S. Treasury regulations, who in the aggregate hold more than 50% of the income or capital interest in the partnership; or
 - such foreign partnership is engaged in the conduct of a United States trade or business.

Backup withholding would apply if the sale is subject to information reporting and the broker has actual knowledge that you are a United States person.

You generally may obtain a refund of any amounts withheld under the backup withholding rules that exceed your income tax liability by timely filing a refund claim with the IRS.

Information With Respect to FATCA

Sections 1471 through 1474 of the Internal Revenue Code of 1986, as amended (“FATCA”) impose a new reporting regime and potentially a 30% withholding tax with respect to certain payments to (i) any non-U.S. financial institution (a “foreign financial institution”, or “FFI” (as defined by FATCA)) that is receiving a payment on an investor’s behalf that does not become a “Participating FFI” by entering into an agreement with the IRS to provide the IRS with certain information in respect of its account holders and investors or is not otherwise exempt from or in deemed compliance with FATCA and (ii) in certain instances, an investor who does not provide information sufficient to determine whether the investor is a U.S. person or in the case of certain non-financial non-exempt entities does not provide information sufficient to determine whether the investor has substantial U.S. owners. The Bank is classified as an FFI. The Bank anticipates that any Securities issued in global form will be held by FFIs that are not non-Participating FFIs but there is no guarantee that a custodian or broker through which an investor holds a Security will not be a non-Participating FFI.

The new withholding regime is now in effect for payments from sources within the United States and will apply to “foreign passthru payments” (a term not yet defined) no earlier than January 1, 2019. This withholding would only apply to payments in respect of any debt securities that are issued on or after the date that is six months after the date on which final U.S. Treasury regulations defining the term “foreign passthru payment” are published in the U.S. Federal Register. If a debt security is issued on or after such date, the application of FATCA to such debt security will be disclosed in the applicable pricing supplement.

The United States and a number of other jurisdictions, including Canada, have entered into intergovernmental agreements to facilitate the implementation of FATCA (each, an “IGA”). These rules generally limit instances when FATCA withholding is required. Nevertheless, these IGAs currently contain no rules regarding the withholding, if any, that may be required on foreign passthru payments.

FATCA is particularly complex and its application is uncertain at this time. The above description is based in part on regulations, official guidance and IGAs, all of which are subject to amendment or further

interpretation by one or more governments or governmental agencies. Prospective investors should consult their tax advisers on how these rules may apply to the Bank and to payments they may receive in connection with the Securities.

CANADIAN TAXATION

In the opinion of Norton Rose Fulbright Canada LLP, Canadian tax counsel to the Bank, the following summary describes the material Canadian federal income tax considerations under the *Income Tax Act* (Canada) (the “Act”) and *Income Tax Regulations* (the “Regulations”) generally applicable to a holder of debt securities who acquires debt securities in the original offering, and who, for purposes of the Act and at all relevant times, (i) is not resident and is not deemed to be resident in Canada; (ii) acquires and holds the debt securities and will hold the common shares acquired on an conversion (as applicable) as capital property (iii) deals at arm’s length with the Bank and any Canadian resident (or deemed Canadian resident) to whom the holder assigns or otherwise transfers the debt securities; (iv) is not affiliated with the Bank, (v) does not use or hold and is not deemed to use or hold debt securities or the common shares in or in the course of carrying on a business in Canada; (vi) is entitled to receive all payments made in respect of the debt securities; (vii) is not, and deals at arm’s length with each person who is, a “specified shareholder” (as defined in subsection 18(5) of the Act) of the Bank; and (viii) is not an insurer carrying on an insurance business in Canada and elsewhere (a “Non-resident Holder”). Generally, the debt securities and the common shares acquired on an conversion will constitute capital property to a holder provided that the holder does not hold the debt securities or common shares (as applicable) in the course of carrying on a business of buying and selling securities and does not acquire them as part of an adventure or concern in the nature of trade.

This summary is based upon the provisions of the Act and the Regulations in force on the date hereof, proposed amendments to the Act and the Regulations in a form publicly announced prior to the date hereof by or on behalf of the Minister of Finance (Canada) (included for this purpose in the reference to the Act and Regulations), and the current administrative practices and policies published in writing by the Canada Revenue Agency (the “CRA”). This summary assumes that such proposed amendments will be enacted as currently proposed but no assurance can be given that this will be the case. This summary does not take into account or anticipate any other changes in law, whether by legislative, governmental or judicial action or interpretation, nor does it take into account provincial, territorial or foreign income tax legislation. Subsequent developments could have a material effect on the following description.

It is the intention of the Bank that the terms and conditions of any debt security, and in particular, any underlying security of such debt security, will not cause the debt security to be “taxable Canadian property” (within the meaning of the Act).

Canadian federal income tax considerations applicable to debt securities may be described particularly, when such debt securities are offered, in the applicable supplement related thereto. In the event the Canadian federal income tax considerations are described in such supplement, the following description will be superseded by the description in the supplement to the extent indicated therein.

This summary is of a general nature only, and is not intended to be, nor should it be considered to be, legal or tax advice to any particular person including any Non-resident Holder. This summary describes only the Canadian federal withholding tax considerations associated with a Non-resident Holder acquiring, holding and disposing of a debt security and a common share acquired on a conversion and does not describe any other Canadian federal income tax considerations which may be relevant to a prospective investor’s decision to acquire debt securities pursuant to the original offering. Prospective investors, including Non-resident Holders, should consult their own legal and/or tax advisers with respect to their particular circumstances.

In general, for the purpose of the Act, all amounts not otherwise expressed in Canadian dollars must be converted into Canadian dollars based on the daily noon rate as quoted by the Bank of Canada for the applicable day or such other rate of exchange that is acceptable to the Minister of National Revenue (Canada).

Interest on Debt Securities

Interest paid or credited or deemed for purposes of the Act to be paid or credited on a debt security (including amounts on account or in lieu of payment of, or in satisfaction of, interest, any amount paid at maturity in

excess of the principal amount and interest deemed to be paid on the debt security in certain cases involving the assignment or other transfer of the debt security to a resident or deemed resident of Canada) to a Non-resident Holder will not be subject to Canadian non-resident withholding tax unless any portion of such interest (other than on a “prescribed obligation” described below) is contingent or dependent on the use of or production from property in Canada or is computed by reference to revenue, profit, cash flow, commodity price or any other similar criterion or by reference to dividends paid or payable to shareholders of any class or series of shares of the capital stock of a corporation (“Participating Debt Interest”). A “prescribed obligation” is a debt obligation the terms or conditions of which provide for an adjustment to an amount payable in respect of the obligation for a period during which the obligation was outstanding which adjustment is determined by reference to a change in the purchasing power of money (an “indexed debt obligation”) and no amount payable in respect thereof, other than an amount determined by reference to a change in the purchasing power of money, is contingent or dependent upon the use of or production from property in Canada or is computed by reference to any of the criteria described in the definition of Participating Debt Interest. **If any interest paid or credited or deemed to be paid or credited on a debt security is to be calculated by reference to a formula, variable or similar factor which could be viewed as a proxy for the profit of the Bank, such interest may be subject to Canadian non-resident withholding tax.**

In the event that a debt security on which any interest paid or credited or deemed to be paid or credited is, or would be, Participating Debt Interest, is redeemed, cancelled, or repurchased, as applicable, or purchased by the Bank or any other person resident or deemed to be resident in Canada from a Non-resident Holder or is otherwise assigned or transferred by a Non-resident Holder to a person resident or deemed to be resident in Canada for an amount which exceeds, generally, the issue price thereof, the excess may, in certain circumstances, be deemed to be interest and may, together with any interest that has accrued or is deemed to have accrued on the debt security to that time, be subject to non-resident withholding tax. Such excess will not be subject to withholding tax if the debt security is considered to be an “excluded obligation” for purposes of the Act. A debt security will be an excluded obligation for this purpose if it is not an indexed debt obligation and it was issued for an amount not less than 97 percent of the principal amount (as defined for the purposes of the Act) of the debt security, and the yield from which, expressed in terms of an annual rate (determined in accordance with the Act) on the amount for which the debt security was issued does not exceed 4/3 of the interest stipulated to be payable on the debt security, expressed in terms of an annual rate on the outstanding principal amount from time to time.

Generally, there are no other taxes on income (including taxable capital gains) payable in respect of a debt security or interest, discount, or premium thereon by a Non-resident Holder.

Conversion

In the event a debt security held by a Non-resident Holder is converted to common shares on a conversion, the amount, if any, by which the fair market value of the common shares received on the conversion exceeds the sum of: (i) price for which the debt security was issued, and (ii) any amount that is paid in respect of accrued and unpaid interest owing on the debt security at the time of conversion (the “Conversion Interest”) (the difference referred to as the “Excess Amount”), may be deemed to be interest paid to the Non-resident Holder. There is a risk that the Excess Amount (if any) and the Conversion Interest could be characterized as Participating Debt Interest and therefore subject to Canadian non-resident withholding tax unless certain exceptions apply. No advance tax ruling has been sought or obtained from CRA and Non-resident Holders of debt securities should consult their own tax advisors in this regard.

If applicable, the normal rate of Canadian non-resident withholding tax is 25% but such rate may be reduced under the terms of an applicable income tax treaty.

The conversion of a debt security into common shares pursuant to a conversion will constitute a disposition of the debt security by the Non-resident Holder for the purposes of the Act. A Non-resident Holder who disposes of a debt security pursuant to a conversion will generally realize a capital gain (or capital loss) to the extent that the proceeds of disposition, excluding any portion thereof that is considered to be interest and any reasonable costs of disposition, exceed (or is less than) the Non-resident Holder’s adjusted cost base of the debt security. Any resulting capital gain or loss will be subject to the income tax treatment described below under the heading “—Disposition of Debt Security or Common Shares”.

Dividends on Common Shares

Dividends paid or credited on the common shares, or deemed under the Act to be paid or credited on the common shares, to a Non-resident Holder will generally be subject to Canadian non-resident withholding tax at the rate of 25% on the gross amount of such dividends unless the rate is reduced under the provisions of an applicable income tax treaty or convention between Canada and the country of residence of the Non-resident Holder. For example, under the *Canada-United States Tax Convention (1980)* (the “Treaty”), the withholding tax rate in respect of a dividend paid to a person who is: (i) the beneficial owner of the dividend; (ii) resident in the United States for purposes of the Treaty, and (iii) entitled to full benefits under the Treaty, is generally reduced to 15%.

Disposition of Debt Security or Common Shares

A Non-resident Holder will not be subject to tax under the Act in respect of any capital gain realized on a disposition or deemed disposition of debt security or a common share unless the debt security or common share, as the case may be, is or is deemed to be “taxable Canadian property” of the Non-resident Holder for the purposes of the Act and the Non-resident Holder is not entitled to an exemption under an applicable income tax convention between Canada and the country in which the Non-resident Holder is resident.

Generally, the debt security and common shares will not constitute taxable Canadian property to a Non-resident Holder at a particular time provided the common shares are listed at that time on a designated stock exchange (which currently includes the TSX), unless at any time during the 60-month period that ends at that time: (a) one or any combination of (i) the Non-resident Holder, (ii) persons with whom the Non-resident Holder does not deal at arm’s length for purposes of the Tax Act, and (iii) partnerships in which the Non-resident Holder or a person described in (ii) holds a membership interest directly or indirectly through one or more partnerships, has owned 25% or more of the issued shares of any class or series of the capital stock of the Bank; and (b) more than 50% of the fair market value of the common shares was derived, directly or indirectly from one or any combination of (i) real or immovable property situated in Canada, (ii) “Canadian resource property” (as defined in the Act), (iii) “timber resource property” (as defined in the Act), and (iv) options in respect of, or interests in, or for civil law rights in, any of the foregoing whether or not the property exists. Notwithstanding the foregoing, in certain circumstances set out in the Act, common shares could be deemed to be taxable Canadian property. Non-resident Holders whose common shares may constitute taxable Canadian property should consult their own tax advisors.

Taxation of Capital Gains and Capital Losses

Generally, one-half of any capital gain (a “taxable capital gain”) realized by a Non-resident Holder in a taxation year must be included in the Non-resident Holder’s income in that year. A Non-resident Holder is required to deduct one-half of any capital loss (an “allowable capital loss”) realized on the disposition of taxable Canadian property in a taxation year from taxable capital gains realized in the year. Allowable capital losses in excess of taxable capital gains realized in a taxation year may be carried back and deducted in any of the three preceding taxation years, or carried forward and deducted in any subsequent year, from net taxable capital gains realized in such years to the extent and under the circumstances described in the Tax Act.

PLAN OF DISTRIBUTION

We may sell all or part of the debt securities at any time after effectiveness of the Registration Statement of which this prospectus forms a part in one or more of the following ways from time to time:

- through underwriters or dealers;
- through agents; or
- directly to one or more purchasers.

The offered securities may be distributed periodically in one or more transactions at:

- a fixed price or prices, which may be changed;
- market prices prevailing at the time of sale;
- prices related to the prevailing market prices; or
- negotiated prices.

The prospectus supplement will include:

- the initial public offering price;
- the names of any underwriters, dealers or agents;
- the purchase price of the securities;
- our proceeds from the sale of the securities;
- any underwriting discounts or agency fees and other underwriters' or agents' compensation;
- any discounts or concessions allowed or reallowed or paid to dealers;
- the place and time of delivery of the securities; and
- any securities exchange on which the securities may be listed.

If underwriters are used in the sale, they will buy the securities for their own account. The underwriters may then resell the securities in one or more transactions, at any time or times at a fixed public offering price or at varying prices. The underwriters may change from time to time any fixed public offering price and any discounts or commissions allowed or re-allowed or paid to dealers. If dealers are utilized in the sale of the securities, we will sell the securities to the dealers as principals. The dealers may then resell the securities to the public at varying prices to be determined by such dealers.

In connection with the offering of securities, we may grant to the underwriters an option to purchase additional securities to cover over-allotments, if any, at the initial public offering price (with an additional underwriting commission), as may be set forth in the prospectus supplement for such securities. If we grant any over-allotment option, the terms of the option will be set forth in the prospectus supplement for the securities.

This prospectus may be delivered by underwriters and dealers in connection with short sales undertaken to hedge exposures under commitments to acquire our securities to be issued on a delayed or contingent basis.

Underwriters, dealers and agents that participate in the distribution of the securities may be underwriters as defined in the Securities Act. Any discounts or commissions that we pay them and any profit they receive when they resell the securities may be treated as underwriting discounts and commissions under that Act. We may have agreements with underwriters, dealers and agents to indemnify them against certain civil liabilities, including liabilities under the Securities Act, to contribute with respect to payments which they may be required to make in respect of such liabilities and to reimburse them for certain expenses.

Each series of offered securities will be a new issue of securities and will have no established trading market. Securities may or may not be listed on a national or foreign securities exchange or automated quotation system. Any underwriters or agents to whom securities are sold for public offering or sale may make, but are not required to make, a market in the securities, and the underwriters or agents may discontinue making a market in the securities at any time without notice. No assurance can be given as to the liquidity or the existence of trading markets for any securities.

Any underwriters utilized may engage in stabilizing transactions and syndicate covering transactions in accordance with Rule 104 of Regulation M under the Exchange Act. Stabilizing transactions permit bids to purchase the offered securities or any underlying security so long as the stabilizing bids do not exceed a specified maximum. Syndicate covering transactions involve purchases of securities in the open market after the distribution has been completed in order to cover syndicate short positions. Such stabilizing transactions and syndicate covering transactions may cause the price of the offered securities to be higher than would be the case in the absence of such transactions.

Under Rule 15c6-1 of the Exchange Act, trades in the secondary market generally are required to settle in three business days, unless the parties to any such trade expressly agree otherwise. The prospectus supplement or pricing supplement may provide that the original issue date for a series of securities may be more than three scheduled business days after the trade date for the securities. Accordingly, in such a case, if you wish to trade the securities on any date prior to the third business day before the original issue date for the securities, you will be required, by virtue of the fact that the securities initially are expected to settle in more than three scheduled business days after the trade date for the securities, to make alternative settlement arrangements to prevent a failed settlement.

While the senior debt securities are exempted from the prospectus requirement under the securities laws of each province or territory of Canada, the subordinated debt securities are not exempt and have not been and will not be qualified for sale under such laws. Accordingly, any sales of subordinated debt securities in Canada will be made only with our prior consent and only in compliance with the securities laws of Canada or any province or territory thereof.

Market-Making Resales By the Bank and its Affiliates

This prospectus may be used by the Bank, RBC Capital Markets, LLC or certain other of the Bank's affiliates (the "Market-Makers") in connection with offers and sales of the notes in market-making transactions. A Market-Maker may engage in market-making transactions only in those jurisdictions in which it has all necessary governmental and regulatory authorizations for such activity. In a market-making transaction, a Market-Maker may resell a security it acquires from other holders, after the original offering and sale of the security. Resales of this kind may occur in the open market or may be privately negotiated, at prevailing market prices at the time of resale or at related or negotiated prices. In these transactions, a Market-Maker may act as principal or agent, including as agent for the counterparty in a transaction in which the Market-Maker acts as principal, or as agent for both counterparties in a transaction in which the Market-Maker does not act as principal. The Market-Makers may receive compensation in the form of discounts or commissions, including from both counterparties in some cases.

The notes to be sold in market-making transactions include notes to be issued after the date of this prospectus, as well as notes previously issued.

The Bank does not expect to receive any proceeds from market-making transactions except to the extent the Bank is entitled to the proceeds of sales of notes made by it in such transactions. The Bank does not expect that the Market-Makers will pay any proceeds from their market-making resales to it.

Information about the trade and settlement dates, as well as the purchase price, for a market-making transaction will be provided to the purchaser in a separate confirmation of sale.

Unless we or an agent informs you in your confirmation of sale that your notes are being purchased in their original offering and sale, you should assume that you are purchasing your notes in a market-making transaction.

Conflicts of Interest

Some of the underwriters, dealers and agents and their affiliates have engaged in, and may in the future engage in, investment banking and other commercial dealings in the ordinary course of business with us or our affiliates. They have received, or may in the future receive, customary fees and commissions for these transactions.

In addition, in the ordinary course of their business activities, the underwriters, dealers and agents and their 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. Such investments and securities activities may involve securities and/or instruments of ours or our affiliates. If any of the underwriters, dealers and agents or their affiliates have a lending relationship with us, certain of those underwriters, dealers and agents or their affiliates routinely hedge, and certain other of those underwriters, dealers and agents or their affiliates may hedge, their credit exposure to us consistent with their customary risk management policies. Typically, such underwriters, dealers and agents and their affiliates would hedge such exposure by entering into transactions which consist of either the purchase of credit default swaps or the creation of short positions in our securities, including potentially the notes offered hereby. Any such credit default swaps or short positions could adversely affect future trading prices of the notes offered hereby. The underwriters, dealers and agents and their affiliates may also make investment recommendations and/or publish or express independent research views in respect of such securities or financial instruments and may hold, or recommend to clients that they acquire, long and/or short positions in such securities and instruments.

Our affiliate, RBC Capital Markets, LLC, may participate in the distribution of the securities as an underwriter, dealer or agent. Any offering of securities in which RBC Capital Markets, LLC participates will be conducted in compliance with the applicable requirements of FINRA Rule 5121, a rule of the Financial Industry Regulatory Authority, Inc. ("FINRA"). RBC Capital Markets, LLC will not participate in the distribution of an offering of securities that do not have a bona fide public market within the meaning of Rule 5121 and are not investment grade rated within the meaning of Rule 5121 or securities in the same series that have equal rights and obligations as investment grade rated securities unless either (1) each member firm responsible for managing the public offering does not have a conflict of interest within the meaning of Rule 5121, is not an affiliate of any member that does have a conflict of interest, and meets the requirements of Rule 5121 with respect to disciplinary history or (2) a qualified independent underwriter has participated in the preparation of the prospectus supplement or other offering document for the offering of securities and has exercised the usual standards of due diligence with respect thereto. Neither RBC Capital Markets, LLC nor any other FINRA member participating in an offering of these securities that has a conflict of interest will confirm initial sales to any discretionary accounts over which it has authority without the prior specific written approval of the customer.

The maximum commission or discount to be received by the participating FINRA members may not exceed 8% of the aggregate principal amount of securities offered pursuant to this prospectus. We anticipate, however, that the maximum commission or discount to be received in any particular offering of securities will be significantly less than this amount.

BENEFIT PLAN INVESTOR CONSIDERATIONS

A fiduciary of a pension, profit-sharing or other employee benefit plan (a “plan”) subject to the Employee Retirement Income Security Act of 1974, as amended (“ERISA”), should consider the fiduciary standards of ERISA in the context of the plan’s particular circumstances before authorizing an investment in the debt securities. Accordingly, among other factors, the fiduciary should consider whether the investment would satisfy the prudence and diversification requirements of ERISA and would be consistent with the documents and instruments governing the plan, and whether the investment would involve a prohibited transaction under Section 406 of ERISA or Section 4975 of the Internal Revenue Code.

Section 406 of ERISA and Section 4975 of the Internal Revenue Code prohibit plans, as well as individual retirement accounts and Keogh plans subject to Section 4975 of the Internal Revenue Code (also “plans”), from engaging in certain transactions involving “plan assets” with persons who are “parties in interest” under ERISA or “disqualified persons” under the Internal Revenue Code (“parties in interest”) with respect to the plan. A violation of these prohibited transaction rules may result in civil penalties or other liabilities under ERISA and/or an excise tax under Section 4975 of the Internal Revenue Code for those persons, unless relief is available under an applicable statutory, regulatory or administrative exemption. Certain employee benefit plans and arrangements including those that are governmental plans (as defined in section 3(32) of ERISA), certain church plans (as defined in Section 3(33) of ERISA) and foreign plans (as described in Section 4(b)(4) of ERISA (collectively “non-ERISA arrangements”) are not subject to the requirements of ERISA or Section 4975 of the Internal Revenue Code but may be subject to similar provisions under applicable federal, state, local, foreign or other regulations, rules or laws (“similar laws”).

The acquisition, holding or, if applicable, exchange of the debt securities by a plan or any entity whose underlying assets include “plan assets” by reason of any Plan’s investment in the entity with respect to which we or certain of our affiliates is or becomes a party in interest may constitute or result in a prohibited transaction under ERISA or Section 4975 of the Internal Revenue Code, unless those notes are acquired pursuant to and in accordance with an applicable exemption. The U.S. Department of Labor has issued five prohibited transaction class exemptions, or “PTCEs”, that may provide exemptive relief if required for direct or indirect prohibited transactions that may arise from the purchase or holding of the notes. These exemptions are:

- PTCE 84-14, an exemption for certain transactions determined or effected by independent qualified professional asset managers;
- PTCE 90-1, an exemption for certain transactions involving insurance company pooled separate accounts;
- PTCE 91-38, an exemption for certain transactions involving bank collective investment funds;
- PTCE 95-60, an exemption for transactions involving certain insurance company general accounts; and
- PTCE 96-23, an exemption for plan asset transactions managed by in-house asset managers.

In addition, ERISA Section 408(b)(17) and Section 4975(d)(20) of the Internal Revenue Code provide statutory exemptive relief for certain arm’s-length transactions with a person that is a party in interest solely by reason of providing services to Plans or being an affiliate of such a service provider. Under these provisions, the purchase and sale of the Notes will not constitute a prohibited transaction under ERISA or Section 4975 of the Internal Revenue Code, provided that neither the issuer of the Notes nor any of its affiliates have or exercise any discretionary authority or control or render any investment advice with respect to the assets of any Plan involved in the transaction, and provided further that the Plan pays no more and receives no less than “adequate consideration” in connection with the transaction (the “service provider exemption”). Any Plan fiduciary considering reliance on the service provider exemption is encouraged to consult with counsel regarding its availability. There can be no assurance that all of the conditions of any such exemptions will be satisfied.

Any purchaser or holder of debt securities or any interest therein will be deemed to have represented (both on behalf of itself and any plan) by its purchase and holding of the debt securities that either (1) it is not a plan and is not purchasing those debt securities on behalf of or with “plan assets” of any plan or (2) the purchase and holding of the debt securities will not constitute a non-exempt prohibited transaction under ERISA or the Internal Revenue Code. In addition, any purchaser or holder of debt securities or any interest therein which is a non-ERISA arrangement will be deemed to have represented by its purchase that its purchase and holding will not violate the provisions of any similar law.

Due to the complexity of these rules and the penalties that may be imposed upon persons involved in non-exempt prohibited transactions, it is important that fiduciaries or other persons considering purchasing debt securities on behalf of or with “plan assets” of any plan or non-ERISA arrangement consult with their counsel regarding the availability of exemptive relief or the potential consequences of any purchase, holding or exchange under similar laws, as applicable.

Each purchaser and holder of the debt securities has exclusive responsibility for ensuring that its purchase and holding of the debt securities does not violate the fiduciary or prohibited transaction rules of ERISA, the Internal Revenue Code or any similar laws. The sale of any debt securities to any plan is in no respect a representation by us or any of our affiliates or representatives that such an investment is appropriate for, and meets all relevant legal requirements with respect to investments by plans generally or any particular plan.

LIMITATIONS ON ENFORCEMENT OF U.S. LAWS AGAINST THE BANK, OUR MANAGEMENT AND OTHERS

We are a Canadian chartered bank. Many of our directors and executive officers, including many of the persons who signed the Registration Statement on Form F-3, of which this prospectus is a part, and some of the experts named in this document, reside outside the United States, and a substantial portion of our assets and all or a substantial portion of the assets of such persons are located outside the United States. As a result, it may be difficult for you to effect service of process within the United States upon such persons to enforce against them judgments of the courts of the United States predicated upon, among other things, the civil liability provisions of the federal securities laws of the United States. In addition, it may be difficult for you to enforce, in original actions brought in courts in jurisdictions located outside the United States, among other things, civil liabilities predicated upon such securities laws.

We have been advised by our Canadian counsel, Norton Rose Fulbright Canada LLP, that a judgment of a United States court predicated solely upon civil liability under such laws would probably be enforceable in Canada if the United States court in which the judgment was obtained has a basis for jurisdiction in the matter that was recognized by a Canadian court for such purposes. We have also been advised by such counsel, however, that there is substantial doubt whether an original action could be brought successfully in Canada predicated solely upon such civil liabilities.

VALIDITY OF SECURITIES

The validity of the debt securities will be passed upon by Sullivan & Cromwell LLP, New York, New York, as to matters of New York law, and by Norton Rose Fulbright Canada LLP, Toronto, Ontario, as to matters of Canadian law and applicable matters of Ontario and Québec law. The validity of the common shares will be passed upon by Norton Rose Fulbright Canada LLP, Toronto, Ontario. Davis Polk & Wardwell LLP, New York, New York will issue an opinion as to certain legal matters for the agents or underwriters.

EXPERTS

The consolidated financial statements incorporated by reference in this prospectus from the 2015 Annual Report and the effectiveness of the Bank’s internal control over financial reporting have been audited by Deloitte LLP, Independent Registered Public Accounting Firm, as stated in their reports which express an unqualified opinion and which are incorporated herein by reference. Such financial statements have been so incorporated in reliance upon the reports of such firm given upon their authority as experts in accounting and auditing.

OTHER EXPENSES OF ISSUANCE AND DISTRIBUTION

The estimated expenses in connection with the offerings hereunder, other than underwriting discounts and commissions, are as follows (in U.S. dollars):

Registration Statement filing fee	\$	55,508
Trustees' fees and expenses	\$	1,500,000
Legal fees and expenses	\$	6,088,000
Accounting fees and expenses	\$	800,000
Printing costs	\$	300,000
Miscellaneous	\$	500,000
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Total	\$	9,243,508
		<hr/>

No dealer, salesperson or other person has been authorized to give any information or to make any representation not contained in this prospectus supplement, the accompanying prospectus or any pricing supplement and, if given or made, such information or representation must not be relied upon as having been authorized by Royal Bank of Canada or the agents. This prospectus supplement, the accompanying prospectus and any pricing supplement do not constitute an offer to sell or a solicitation of an offer to buy any securities other than the securities described in the relevant pricing supplement nor do they constitute an offer to sell or a solicitation of an offer to buy the securities in any jurisdiction to any person to whom it is unlawful to make such offer or solicitation in such jurisdiction. The delivery of this prospectus supplement, the accompanying prospectus and any pricing supplement at any time does not imply that the information they contain is correct as of any time subsequent to their respective dates.

US\$ 40,000,000,000



Royal Bank of Canada

Senior Global

Medium-Term Notes, Series G

January 8, 2016