IMPORTANT NOTICE

THIS OFFERING CIRCULAR SUPPLEMENT IS BEING PROVIDED ONLY TO INVESTORS WHO ARE QUALIFIED INSTITUTIONAL BUYERS (AS DEFINED BELOW) OR NON-"U.S. PERSONS" OUTSIDE THE UNITED STATES.

IMPORTANT: You must read the following before continuing. The following applies to the Offering Circular Supplement following this page (the "**Offering Circular Supplement**"), and you are therefore advised to read this carefully before reading, accessing or making any other use of the Offering Circular Supplement. In accessing the Offering Circular Supplement, you agree to be bound by the following terms and conditions, including any modifications to them any time you receive any information from us as a result of such access.

NOTHING IN THIS ELECTRONIC TRANSMISSION CONSTITUTES AN OFFER TO SELL OR THE SOLICITATION OF AN OFFER TO BUY THE SECURITIES OF THE NATIONAL BANK OF CANADA (THE "**BANK**"). THE FOLLOWING OFFERING CIRCULAR SUPPLEMENT MAY NOT BE FORWARDED OR DISTRIBUTED TO ANY OTHER PERSON AND MAY NOT BE REPRODUCED IN ANY MANNER WHATSOEVER, AND IN PARTICULAR, MAY NOT BE FORWARDED TO ANY U.S. PERSON OR TO ANY U.S. ADDRESS. ANY FORWARDING, DISTRIBUTION OR REPRODUCTION OF THIS DOCUMENT IN WHOLE OR IN PART IS UNAUTHORIZED. FAILURE TO COMPLY WITH THIS DIRECTIVE MAY RESULT IN A VIOLATION OF THE U.S. SECURITIES ACT OF 1933, AS AMENDED (THE "**SECURITIES ACT**") OR THE APPLICABLE LAWS OF OTHER JURISDICTIONS.

The Offering Circular Supplement has been delivered to you on the basis that you are a person into whose possession the Offering Circular Supplement may be lawfully delivered in accordance with the laws of the jurisdiction in which you are located and you may not, nor are you authorized to, deliver the Offering Circular Supplement to any other person. By accepting this email and accessing the Offering Circular Supplement, you shall be deemed to have confirmed and represented to us that (a) you have understood and agreed to the terms set out herein, (b) you consent to delivery of the Offering Circular Supplement by electronic transmission, (c) you are (i) a "qualified institutional buyer" within the meaning of Rule 144A under the Securities Act, or (ii) a non-"U.S. Person" within the meaning of Regulation S under the Securities Act, and (d) if you are a person in the United Kingdom, then you are a person who (i) has professional experience in matters relating to investments and/or (ii) is a high net worth entity falling within Article 49(2)(a) to (e) of the Financial Services and Markets Act 2000 (Financial Promotion) Order 2005. This document and the accompanying Offering Circular are not a "prospectus" for purposes of Section 12(a)(2) or any other provisions of the Securities Act.

The Offering Circular Supplement has been sent to you in an electronic form. You are reminded that documents transmitted via this medium may be altered or changed during the process of electronic transmission and consequently neither the Bank nor any agent identified in the Offering Circular Supplement (nor any person who controls it nor any director, officer, employee nor agent of it or affiliate of any such person) accepts any liability or responsibility whatsoever in respect of any difference between the Offering Circular Supplement distributed to you in electronic format and the hard copy version available to you on request from such agent.

OFFERING CIRCULAR SUPPLEMENT FOR RATE-LINKED NOTES
(To the Offering Circular dated May 1, 2019)

NATIONAL BANK OF CANADA

(as Issuer)

Rate-Linked Notes

Fixed Rate Notes	**Accrual Notes**	**Inverse Floating Rate Notes**	**Dual Range Accrual Notes**
Floating Rate Notes	**Fixed-to-Floating Rate Notes**	**Leveraged Notes**	**Non-Inversion Range Accrual Notes**
Step Up Notes	**Floating-to-Fixed Rate Notes**	**Range Accrual Notes**	**Leveraged Steepener Notes**

National Bank of Canada, a Canadian chartered bank ("**we**," "**us**" or the "**Bank**"), may offer from time to time the types of notes listed above (collectively, the "**Notes**"). The offering circular dated May 1, 2019 (the "**Offering Circular**") and this Offering Circular Supplement describe terms of different kinds of Notes and the terms that may apply generally to the Notes, including any Notes you purchase. A separate pricing supplement (each, a "**Pricing Supplement**") will describe the terms that apply specifically to your Notes, including any changes to the terms specified below. If the terms described in the relevant Pricing Supplement are inconsistent with those described in this Offering Circular Supplement or in the Offering Circular, the terms described in the relevant Pricing Supplement will control.

Subject to the Bank's credit risk, unless otherwise set forth in the applicable Pricing Supplement, you will receive the principal amount of your Notes at maturity (as extended, if applicable). You may also receive periodic interest on the dates specified in the applicable Pricing Supplement. The amount of the interest payments, and any method by which they will be determined, will also be set forth in the applicable Pricing Supplement.

The applicable Pricing Supplement will describe the specific terms of the Notes, including any changes to the terms specified in this Offering Circular Supplement. See "Description of the Notes" on page S-10.

Investing in the Notes involves risks not associated with an investment in ordinary debt securities. See "Additional Risk Factors Specific to the Notes" beginning on page S-6 and "Risk Factors" beginning on page 7 of the Offering Circular for a discussion of certain risk factors to be considered in connection with an investment in the Notes.

The Notes we offer under this Offering Circular Supplement are among the Notes we refer to as our Series B Medium-Term Notes. We refer to the offering of the Series B Medium-Term Notes as the "**Program**." The Notes under the Program will not be, and are not required to be, registered with the Securities and Exchange Commission (the "**SEC**") under the United States Securities Act of 1933, as amended (the "**Securities Act**"). The Notes will not be approved or disapproved by the SEC or any state securities commission, nor has the SEC or any state securities commission passed upon the accuracy or adequacy of this Offering Circular. Any representation to the contrary is a criminal offense.

The Notes under the Program will initially be offered and sold pursuant to an exemption from registration provided by Section 4(a)(2) of the Securities Act and only to (i) in the United States to investors that are "qualified institutional buyers" within the meaning of Rule 144A under the Securities Act or (ii) outside the United States to non-"U.S. Persons," within the meaning of Regulation S under the Securities Act. See "*Description of the Notes*" in the accompanying Offering Circular for a description of the manner in which the Notes will be issued. The Notes are subject to certain restrictions on transfer; see "*Plan of Distribution and Conflicts of Interest*" in the accompanying Offering Circular.

The Notes under the Program will constitute legal, valid and binding direct, unconditional, unsubordinated and unsecured obligations of the Bank and will rank equally with all deposit liabilities of the Bank without any preference among themselves (save for any applicable statutory provisions) and equally with all other present and future unsecured and unsubordinated obligations of the Bank, from time to time outstanding except for certain governmental claims, in both cases subject to the Canadian bank resolution powers as discussed under "*Description of the Notes—Canadian Bank Resolution Powers*" in the accompanying Offering Circular.

The Notes under the Program are not bank deposits insured or guaranteed by the Federal Deposit Insurance Corporation or any other governmental agency or authority in the United States. While the Notes will constitute deposits for purposes of the *Bank Act* (Canada), they are not insured or guaranteed by any governmental agency or authority in Canada or any other jurisdiction, or under the *Canada Deposit Insurance Corporation Act* (Canada)(the "*CDIC Act*"). The Notes are not otherwise guaranteed by any person.

Notes that are Bail-inable Notes (as defined herein) are subject to conversion in whole or in part – by means of a transaction or series of transactions and in one or more steps – into common shares of the Bank or any of its affiliates under subsection 39.2(2.3) of the CDIC Act and to variation or extinguishment in consequence, and subject to the application of the laws of Canada or of a province thereof in respect of the operation of the CDIC Act.

Each purchaser of the Notes under the Program will be deemed, by its acceptance or purchase thereof, to have made certain acknowledgments, representations and agreements intended to restrict the resale or other transfer of such Note, as described in this Offering Circular, and, in connection therewith, may be required to provide confirmation of its compliance with such resale or other transfer restrictions in certain cases. See "*Plan of Distribution and Conflicts of Interest—Selling Restrictions*" in the Offering Circular.

Co-Arrangers and Agents for the Program

National Bank of Canada Financial Inc.   Citigroup

Other Agents

Any other Agents the Bank may appoint from time to time

May 1, 2019

NOTICE TO INVESTORS

The Notes have not been and will not be approved or disapproved by the United States Securities and Exchange Commission (the "SEC") or any other securities commission or other regulatory authority in the United States, nor have the foregoing authorities approved this Offering Circular Supplement or confirmed the accuracy or determined the adequacy of the information contained in this Offering Circular Supplement. Any representation to the contrary is unlawful.

The Notes will be offered and sold pursuant to the exemption from registration provided by Section 4(a)(2) of the Securities Act of 1933, as amended (the "Securities Act") and will be represented by one or more global notes (the "Global Notes"). In addition, the Notes will exclusively be offered and sold, and this Offering Circular Supplement is being provided, on a confidential basis (i) in the United States to investors that are "qualified institutional buyers" ("QIBs") within the meaning of Rule 144A under the Securities Act or (ii) outside the United States to investors that are non-"U.S. Persons" within the meaning of Regulation S under the Securities Act. This Offering Circular Supplement is provided for informational use solely in connection with the consideration of the purchase of the Notes being offered hereby from time to time. Its use for any other purpose in the United States is not authorized. It may not be copied or reproduced in whole or in part nor may it be distributed or any of its contents disclosed to anyone other than the prospective investors to whom it is originally submitted.

Any recipient of (i) this Offering Circular Supplement and/or any information incorporated by reference herein, (ii) any financial statements and/or any information incorporated by reference therein, or (iii) any other information provided in connection with the Notes, should not consider the receipt of such materials as an invitation to purchase or a recommendation by us, any Agent (as defined in the Offering Circular) or the Trustee (as defined in the Offering Circular) to subscribe for or purchase any Note. You should determine for yourself the relevance of the information contained or incorporated by reference in this Offering Circular Supplement, should make your own independent investigation of the condition (financial or otherwise) and affairs, and your own appraisal of the creditworthiness, of the Bank and should consult your own legal and financial advisers prior to subscribing for or purchasing any of the Notes. Your purchase of Notes should be based upon such investigation as you deem necessary. You cannot rely, and are not entitled to rely, on any Agent or the Trustee in connection with their investigation of the accuracy of any information or their decision whether to subscribe for, purchase or invest in the Notes. No Agent nor the Trustee undertakes any obligation to advise you of any information coming to the attention of any Agents or the Trustee, as the case may be.

The distribution of this Offering Circular Supplement and the offering, sale and delivery of the Notes in certain jurisdictions may be restricted by law. In particular, no action has been taken by the Bank or any Agent which would permit a public offering of the Notes or distribution of this Offering Circular Supplement in any jurisdiction where action for that purpose is required. Accordingly, the Notes may not be offered or sold, directly or indirectly, and neither this Offering Circular Supplement nor any advertisement or other offering material may be distributed or published in any jurisdiction, except under circumstances that will result in compliance with all applicable laws and regulations, and any Agents have represented that all offers and sales by them will be made on the same terms. Persons into whose possession this Offering Circular Supplement comes are required by the Bank, the Trustee and any Agents to inform themselves about and to observe any such restrictions. For a description of certain restrictions on offers, sales and deliveries of Notes and on the distribution of this Offering Circular Supplement and other offering material relating to the Notes in Canada, the United States, the European Economic Area (the "EEA") (including the United Kingdom), Hong Kong, Japan and Singapore, see "*Plan of Distribution and Conflicts of Interest*" in the Offering Circular. This Offering Circular Supplement may not be used for the purpose of an offer or solicitation by anyone in any jurisdiction in which such offer or solicitation is not authorized or to any person to whom it is unlawful to make such an offer or solicitation.

The Notes are not intended to be offered, sold or otherwise made available to and should not be offered, sold or otherwise made available to any retail investor in the EEA. For these purposes, the expression "offer" includes 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 the Notes, and a "retail investor" means a person who is one (or more) of: (i) a retail client as defined in point (11) of

Article 4(1) of Directive 2014/65/EU, as amended ("MiFID II"); (ii) a customer within the meaning of Directive (EU) 2016/97, as amended, where that customer would not qualify as a professional client as defined in point (10) of Article 4(1) of MiFID II; or (iii) not a qualified investor as defined in Directive 2003/71/EC, as amended or superseded. Consequently no key information document required by Regulation (EU) No 1286/2014, as amended (the "PRIIPs Regulation"), for offering or selling the Notes or otherwise making them available to retail investors in the EEA has been prepared and therefore offering or selling the Notes or otherwise making them available to any retail investor in the EEA may be unlawful under the PRIIPs Regulation.

By its acquisition of an interest in any Bail-inable Note (as defined herein), each holder or beneficial owner of that Note is deemed to (i) agree to be bound, in respect of the Bail-inable Notes, by the CDIC Act, including the conversion of the Bail-inable Notes, in whole or in part – by means of a transaction or series of transactions and in one or more steps – into common shares of the Bank or any of its affiliates under subsection 39.2(2.3) of the CDIC Act and the variation or extinguishment of the Bail-inable Notes in consequence, and by the application of the laws the Province of Québec and the federal laws of Canada applicable therein in respect of the operation of the CDIC Act with respect to the Bail-inable Notes; (ii) attorn and submit to the jurisdiction of the courts in the Province of Québec with respect to the CDIC Act and those laws; (iii) acknowledge and agree that the terms referred to in clauses (i) and (ii) above, are binding on that holder or beneficial owner despite any provisions in the indenture or the Bail-inable Notes, any other law that governs the Bail-inable Notes and any other agreement, arrangement or understanding between that holder or beneficial owner and the Bank with respect to the Bail-inable Notes; and (iv) have represented and warranted to the Bank that the Bank has not directly or indirectly provided financing to it for the express purpose of investing in Bail-inable Notes.

All references in this Offering Circular Supplement to "U.S.$," "U.S. dollars," "USD" or "United States dollars" are to the currency of the United States of America, and all references to "$," "C$," "CAD" or "Canadian dollars" are to the currency of Canada. In the documents incorporated by reference in this Offering Circular Supplement, unless otherwise specified herein or the context otherwise requires, references to "$" are to Canadian dollars.

All references in this Offering Circular Supplement to the "European Economic Area" or "EEA" are to the Member States of the European Union together with Iceland, Norway and Liechtenstein.

If your investment authority is subject to legal restrictions you should consult your legal advisers to determine whether and to what extent the Notes constitute legal investments for you. See "*Risk Factors—Legal investment considerations may restrict certain investments*" in the accompanying Offering Circular.

FORWARD-LOOKING STATEMENTS

From time to time, the Bank makes written and oral forward-looking statements, such as those contained in the "*Major Economic Trends*" section of its Annual Report incorporated by reference in the Offering Circular and this Offering Circular Supplement, in other filings with Canadian securities regulators, and in other communications, for the purpose of describing the economic environment in which the Bank will operate during fiscal 2019 and the objectives it hopes to achieve for that period. These forward-looking statements are made in accordance with current securities legislation in Canada and the United States. They include, among others, statements with respect to the economy—particularly the Canadian and U.S. economies—market changes, observations regarding the Bank's objectives and its strategies for achieving them, Bank-projected financial returns and certain risks faced by the Bank. These forward-looking statements are typically identified by future or conditional verbs or words such as "outlook," "believe," "anticipate," "estimate," "project," "expect," "intend," "plan," and similar terms and expressions.

By their very nature, such forward-looking statements require assumptions to be made and involve inherent risks and uncertainties, both general and specific. Assumptions about the performance of the Canadian and U.S. economies in 2019 and how that will affect the Bank's business are among the main factors considered in setting the Bank's strategic priorities and objectives and in determining its financial targets, including provisions for credit losses. In determining its expectations for economic growth, both broadly and in the financial services sector in particular, the Bank primarily considers historical economic data provided by the Canadian and U.S. governments and their agencies.

There is a strong possibility that express or implied projections contained in these forward-looking statements will not materialize or will not be accurate. The Bank recommends that readers not place undue reliance on these statements, as a number of factors, many of which are beyond the Bank's control, could cause actual future results, conditions, actions or events to differ significantly from the targets, expectations, estimates or intentions expressed in the forward-looking statements. These factors include credit risk, market risk, liquidity and funding risk, operational risk, regulatory compliance risk, reputation risk, strategic risk and environmental risk, all of which are described in more detail in the "*Risk Management*" section beginning on page 52 of the 2018 Annual Report; general economic environment and financial market conditions in Canada, the United States and certain other countries in which the Bank conducts business, including regulatory changes affecting the Bank's business, capital and liquidity; changes in the accounting policies the Bank uses to report its financial condition, including uncertainties associated with assumptions and critical accounting estimates; tax laws in the countries in which the Bank operates, primarily Canada and the United States (including the U.S. Foreign Account Tax Compliance Act (FATCA)); changes to capital and liquidity guidelines and to the manner in which they are to be presented and interpreted; changes to the credit ratings assigned to the Bank; and potential disruptions to the Bank's information technology systems, including evolving cyber attack risk.

The foregoing list of risk factors is not exhaustive. Additional information about these factors can be found in the "*Risk Management*" section of the 2018 Annual Report. Investors and others who rely on the Bank's forward-looking statements should carefully consider the above factors as well as the uncertainties they represent and the risk they entail. Except as required by law, none of the Bank, the Trustee, any Agents or any other person undertakes to update any forward-looking statements, whether written or oral, that may be made from time to time, by it or on its behalf.

The forward-looking information contained in this document is presented for the purpose of interpreting the information contained herein and may not be appropriate for other purposes. Additional information about these factors can be found under "*Risk Factors*" in the Offering Circular and "*Additional Risk Factors Specific to the Notes"* herein.

Neither we nor the Agents, the Trustee or any other person undertakes to update any forward-looking statement, whether written or oral, that may be made from time to time by or on our behalf except as may be required by law.

LIMITATIONS ON ENFORCEMENT OF U.S. LAWS AGAINST THE BANK, ITS MANAGEMENT AND OTHERS

We are a Canadian chartered bank. Many of our directors and executive officers and some of the experts named in this document are resident 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 investors 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 investors 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, McCarthy Tétrault LLP, that a judgment of a United States court predicated solely upon civil liability of a compensatory nature under such laws would probably be enforceable under applicable Canadian law 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 and if the other relevant criteria for the recognition of foreign judgments have been fulfilled. We have also been advised by such counsel, however, that there is some residual doubt whether an original action could be brought successfully in Canada predicated solely upon such civil liabilities.

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Offering Circular Supplement

Offering Circular dated May 1, 2019

You should rely only on the information contained or incorporated by reference in this Offering Circular Supplement, the Offering Circular and any applicable Pricing Supplement. We have not authorized anyone else to provide you with different or additional information. We are offering to sell these securities and seeking offers to buy these securities only in jurisdictions where offers and sales are permitted. As used in this Offering Circular Supplement, the "Bank," "we," "us," and "our" refer to National Bank of Canada.

SUMMARY

The following summary describes the rate-linked Notes that we, National Bank of Canada, may offer from time to time, in general terms only. You should read the summary together with the more detailed information contained in this Offering Circular Supplement, in the accompanying Offering Circular and in the applicable Pricing Supplement.

*We will sell these Notes primarily in the United States, but may also sell them outside the United States or both in and outside the United States simultaneously. The Notes we offer under this Offering Circular Supplement are among the Notes we refer to as our Series B Medium-Term Notes. We refer to the offering of the Series B Medium-Term Notes as the "**Program**." See "Plan of Distribution and Conflicts of Interest" in the Offering Circular.*

Issuer:	National Bank of Canada (the "**Bank**").
Principal Amount:	As specified in the applicable Pricing Supplement.
Maturity Date:	As specified in the applicable Pricing Supplement.
Interest Rate:	As specified in the applicable Pricing Supplement.
Leverage Rate:	As specified in the applicable Pricing Supplement, if applicable.
Reference Rate(s):	As specified in the applicable Pricing Supplement, if applicable.
Reference Rate Range(s):	As specified in the applicable Pricing Supplement, if applicable.
Initial Interest Period(s):	As specified in the applicable Pricing Supplement, if applicable.
Subsequent Interest Period(s):	As specified in the applicable Pricing Supplement, if applicable.
Type of Note:	As specified in the applicable Pricing Supplement.
Interest Determination Dates and Interest Reset Dates:	Unless otherwise set forth in the applicable Pricing Supplement, as set forth in the Offering Circular.
Interest Payment Dates:	On the date or dates specified in the applicable Pricing Supplement; *provided* that if any such day is not a business day, that interest payment will be made on the next succeeding business day, and adjustment will be made to the interest period or to any interest payment made on any succeeding business day, unless otherwise specified in the applicable Pricing Supplement. The applicable Pricing Supplement may specify that the interest dates are monthly, quarterly, semi-annually, annually, or at other specified intervals, or that interest will be paid only at maturity (as extended, if applicable).
Interest Payable:	Unless otherwise specified in the applicable Pricing Supplement, for any interest payment date (as specified in the applicable Pricing Supplement), you will receive: If your Note is a **fixed rate note**, you will receive on each interest payment date (as specified in the applicable Pricing Supplement) an amount equal to the fixed rate of interest (or other financial measure) specified in the applicable Pricing Supplement *times* the actual number of calendar days from and including the last interest payment

date (or the date of issue, for the initial interest period) to but excluding the next interest payment date or the maturity date (as extended, if applicable), as the case may be, in each case, assuming a calendar of twelve 30-day months, divided by 360.

If your Note is a **floating rate note**, you will receive on each interest payment date an amount equal to the floating rate of interest (or other financial measure) specified in the applicable Pricing Supplement times the actual number of calendar days from and including the last interest payment date (or the date of issue, for the initial interest period) to but excluding the next interest payment date or the maturity date (as extended, if applicable), as the case may be, in each case assuming a calendar of twelve 30-day months, divided by 360.

If your Note is a **step up note**, you will receive on each interest payment date (as specified in the applicable Pricing Supplement) an amount equal to the applicable fixed rate of interest (or other financial measure) specified in the applicable Pricing Supplement for that period *times* the actual number, of calendar days from and including the last interest payment date (or the date of issue for the initial interest period) to but excluding the next interest payment date or the maturity date (as extended, if applicable), as the case may be, in each case assuming a calendar of twelve 30-day months, divided by 360.

If your Note is an **accrual note**, you will receive at maturity (as extended, if applicable) an amount equal to the fixed rate of interest (or other financial measure) specified in the applicable Pricing Supplement times the actual number of calendar days from and including the date of issue to but excluding the maturity date (as extended, if applicable), assuming a calendar of twelve 30-day months, *divided by* 360 and compounded on the basis specified in the applicable Pricing Supplement.

If your Note is a **fixed-to-floating rate note**, the return on your Note during the initial interest period will be the fixed rate of interest (or other financial measure), and during the subsequent interest period, the floating rate of interest (or other financial measure), all as specified in the applicable Pricing Supplement. During each period, you will receive on each interest payment date (as specified in the applicable Pricing Supplement) an amount equal to the fixed or floating rate of interest (or other financial measure), as applicable, times the actual number of calendar days from and including the last interest payment date (or the date of issue for the initial interest period) to but excluding the next interest payment date or the maturity date (as extended, if applicable), as the case may be, in each case, assuming a calendar of twelve 30-day months, divided by 360.

If your Note is a **floating-to-fixed rate note**, the return on your Note during the initial interest period will be the floating rate of interest (or other financial measure), and during the subsequent interest period, the fixed rate of interest (or other financial measure), all as specified in the applicable Pricing Supplement. During each period, you will receive on each interest payment date an amount equal to the floating or fixed rate of interest (or other financial measure), as applicable, times the actual number of calendar days from and including the last interest payment date (or the date of issue, for the initial interest period) to but excluding the next interest payment date or the maturity date (as extended, if applicable), as the case may be, in each case, assuming a calendar of twelve 30-day months, divided by 360.

If your Note is an **inverse floating rate note**, you will receive on each interest payment date (as specified in the applicable Pricing Supplement) an amount equal to the difference, if positive, equal to a fixed rate of interest less the floating rate of interest (or other financial measure), each as specified in the applicable Pricing Supplement, times the actual number of calendar days from and including the last interest payment date (or the date of issue, for the initial interest period) to but excluding the next interest payment date or the maturity date (as extended, if applicable), as the case may be, in each case assuming a calendar of twelve 30-day months, divided by 360.

If your Note is a **leveraged note**, you will receive on each interest payment date an amount equal to the fixed or floating rate of interest (or other financial measure) times the leverage rate, each as specified in the applicable Pricing Supplement, times the actual number of calendar days from and including the last interest payment date (or the date of issue, for the initial interest period) to but excluding the next interest payment date or the maturity date (as extended, if applicable), as the case may be, in each case assuming a calendar of twelve 30-day months, divided by 360.

If your Note is a **range accrual note**, you will receive on each interest payment date a fixed or floating rate of interest (or other financial measure) specified in the applicable Pricing Supplement times a fraction, the numerator of which is the number of calendar days in the applicable interest period on which the reference rate is within the reference rate range, and the denominator of which is the total number of calendar days in the applicable interest period, in each case assuming a calendar of twelve 30-day months, divided by 360. The reference rate on any non-business day will be equal to the rate on the immediately preceding business day, and for the last four business days before each interest payment date, the reference rate will be determined by reference to its level on the fifth business day before such interest payment date.

If your Note is a **dual range accrual note**, you will receive on each interest payment date the fixed or floating rate of interest (or other financial measure) specified in the applicable Pricing Supplement, times a fraction, the numerator of which is the number of calendar days in the applicable interest period on which each of two specified reference rates are within the reference rate range(s), and the denominator of which is the total number of calendar days in the applicable interest period, in each case assuming a calendar of twelve 30-day months, divided by 360. The reference rates on any non-business day will be equal to the rates on the immediately preceding business day, and for the last four business days before each interest payment date, the reference rates will be determined by reference to their level on the fifth business day before such interest payment date.

If your Note is a **non-inversion range accrual note**, you will receive on each interest payment date a fixed or floating rate of interest (or other financial measure) specified in the applicable Pricing Supplement times a fraction, the numerator of which is the number of calendar days in the applicable interest period on which the high-side reference rate exceeded the low-side reference rate (each as defined below) by an amount equal to or above the minimum spread level (as defined below) specified in the applicable Pricing Supplement, and the denominator of which is the total number of calendar days in the applicable interest period, in each case assuming a calendar of twelve 30-day months, divided by 360. The reference rate on any non-business day will be equal to the rate on the immediately preceding business day and, for the last four business days before each interest payment date, the low-side reference rate and the high-side reference rate will be determined by reference to their levels on the fifth business day (or, if not a business day, the immediately preceding business day) before such interest payment date.

If your Note is a **leveraged steepener note**, you will receive on each interest payment date (as specified in the applicable Pricing Supplement) an amount equal to, during the initial interest period (if the applicable Pricing Supplement provides for an initial interest period), the initial rate of interest (or other financial measure) specified in the applicable Pricing Supplement (which will be a fixed rate), times the actual number of calendar days from and including the last interest payment date (or the date of issue, for the initial interest period) to but excluding the next interest payment date or the maturity date (as extended, if applicable), as the case may be, in each case assuming a calendar of twelve 30-day months, divided by 360. During each subsequent interest period (or, if the applicable Pricing Supplement does not provide for an initial interest period, on each interest payment date during the term of the Notes), you will receive an amount equal to the leverage factor times the difference between the high-side reference rate and the low-side reference rate (all as specified in the applicable Pricing Supplement), times the actual number of calendar days from and including the last interest payment date (or the date of issue, for the initial interest period) to but excluding the next interest payment date or the maturity date (as extended, if applicable), as the case may be, in each case assuming a calendar of twelve 30-day months, divided by 360; provided, however, that the interest rate can never be less than 0.00% and that the interest rate on any non-business day will be equal to the interest rate on the immediately preceding business day.

Payment at Maturity: On the maturity date (as extended, if applicable), you will receive the principal amount of your Notes plus any accrued and unpaid interest.

Extension of Maturity: If set forth in the applicable Pricing Supplement, the maturity date of the Notes may be subject to multiple extensions if the Issuer provides timely notice and the Extension Conditions are satisfied as described herein.

Redemption: If the applicable Pricing Supplement specifies that the Notes are "**Redeemable**," we will redeem the Notes at a price equal to 100% of the principal amount plus accrued and unpaid interest to the redemption date on any payment date on or after the "**Call Effective Date**" specified in the applicable Pricing Supplement. If the applicable Pricing Supplement specifies that the Notes are "**Not Redeemable**," then we will not have the option to redeem your Notes prior to maturity (as extended, if applicable) except as specified under "*Description of the Notes—Redemption and Repurchase—Redemption for Taxation Reasons*" in the Offering Circular.

In certain circumstances where the redemption of the Notes would result in the Bank not meeting the TLAC requirements applicable to it pursuant to the TLAC Guideline (as defined in the Offering Circular), such redemption would be subject to the prior approval of the Superintendent of Financial Institutions as discussed in the Offering Circular under "*Description of the Notes — Redemption and Repurchase —Approval of Redemption, Repurchase and Defeasance; Amendments and Modifications"* with respect to Bail-inable Notes.

Bail-inable Notes: The applicable Pricing Supplement will specify whether your Note is a Bail-inable Note. Notes that are Bail-inable Notes are subject to conversion in whole or in part by means of a transaction or series of transactions and in one or more steps into common shares of the Bank or any of its affiliates under subsection 39.2(2.3) of the CDIC Act and to variation or extinguishment in consequence, and by the application of the laws of the Province of Québec and the federal laws of Canada applicable therein in respect of the operation of the CDIC Act with respect to the Bail-inable Notes. See "Description of the Notes — Special Provisions Related to Bail-inable Notes."

Put Option:	You will only have the right to require us to repurchase your Notes prior to maturity (as extended, if applicable) if so specified in the applicable Pricing Supplement.
Cap:	If the applicable Pricing Supplement specifies that the Notes are "**Capped**," the interest rate payable on your Notes during any interest period will be the lesser of (a) the interest rate, determined as set forth in the Pricing Supplement and (b) the applicable Cap.
Floor:	If the applicable Pricing Supplement specifies that the Notes have a "**Floor**," the interest rate payable on your Notes during any interest period will be the higher of (a) the interest rate, determined as set forth in the Pricing Supplement and (b) the applicable Floor.
Clearance and Settlement:	DTC global (including through its indirect participants Euroclear and Clearstream, Luxembourg as described under "*Book-Entry Clearance Systems*" in the Offering Circular).
Listing:	The Notes will not be listed on any securities exchange, unless otherwise disclosed in the applicable Pricing Supplement.
Calculation Agent:	As specified in the applicable Pricing Supplement.

ADDITIONAL RISK FACTORS SPECIFIC TO THE NOTES

An investment in your Notes is subject to the risks described below, as well as the risks described under "Risk Factors" in the Offering Circular. Your Notes are not secured debt and are riskier than ordinary unsecured debt securities. You should carefully consider whether the Notes are suited to your particular circumstances. This Offering Circular Supplement should be read together with the Offering Circular and the relevant Pricing Supplement. The information in the Offering Circular is supplemented by, and to the extent inconsistent therewith replaced and superseded by, the information in this Offering Circular 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 Offering Circular Supplement, the Offering Circular and the relevant Pricing Supplement, before investing in the Notes.***

The Interest Rate of Certain Types of Notes Is Not Certain for One or More Interest Periods, and May Be Zero or Very Low.

Except for any interest periods, if any, in which your Notes will bear interest at a fixed rate, the interest rate for one or more interest periods during the term of the Notes will not be known on the pricing date of your Notes. Depending on the terms set forth in the applicable Pricing Supplement, it is possible that the applicable interest rate for one or more interest periods may be 0%, or if the rate is above 0%, it may be substantially less than the rate of interest that we would pay on conventional debt securities with a comparable term. You should carefully read the terms of the Notes that will be set forth in the applicable Pricing Supplement in order to determine the extent to which the interest rate on your Notes during any period may be so limited.

If the reference rate(s) remain(s) outside the reference rate range(s) for range accrual notes, dual range accrual notes or non-inversion range accrual notes for a substantial number of days during an interest period, the effective yield on the Notes for that interest period may be zero or less than the rate payable on conventional, fixed-rate notes of comparable maturity.

Even if your yield on the Notes is positive, and even if your Notes have a specified fixed rate of interest for one or more interest periods, your total yield may be less than the yield you would earn if you bought a standard senior non-callable debt security of the Bank with the same maturity date. The return on your investment may not compensate you for the opportunity cost when you take into account factors, such as inflation, that affect the time value of money.

Depending on the terms of your Notes, you should, therefore, be prepared to realize no return at maturity (as extended, if applicable) over the principal amount of your Notes.

Payments on the Notes Are Subject to Our Credit Risk, and Changes in Our Credit Ratings Are Expected to Affect the Market Value of the Notes.

The Notes are the Bank's senior unsecured debt securities and are not, either directly or indirectly, an obligation of any third party. As a result, your receipt of each interest payment, if any, and the amount due on the maturity date (as extended, if applicable) is dependent upon the Bank's ability to repay its obligations as of each payment date. Any payment to be made on the Notes, including any repayment of principal at maturity (as extended, if applicable), depends on the ability of the Bank to satisfy its obligations as they come due. No assurance can be given as to what our financial condition will be at any time during the term of the Notes, or at maturity (as extended, if applicable).

Your Notes May Be Subject to Early Redemption.

Depending upon the terms of your Notes, we may have the right to redeem them, or the Notes may be automatically redeemable under some circumstances. If we redeem your Notes, depending on the market conditions at the time of redemption, you may not be able to reinvest the redemption proceeds in a security with a comparable return.

In certain circumstances where the redemption of the Notes would result in the Bank not meeting the TLAC requirements applicable to it pursuant to the TLAC Guideline (as defined in the Offering Circular), such redemption would be subject to the prior approval of the Superintendent of Financial Institutions as discussed in the Offering Circular under "*Description of the Notes — Redemption and Repurchase —Approval of Redemption, Repurchase and Defeasance; Amendments and Modifications*" with respect to Bail-inable Notes.

For Range Accrual Notes, Dual Range Accrual Notes and Non-Inversion Range Accrual Notes, the Applicable Reference Rate(s) for the Last Four Business Days of an Interest Period Will Be the Reference Rate(s) on the Applicable Business Day Immediately Preceding Those Four Days.

For range accrual notes, dual range accrual notes and non-inversion range accrual notes, because the applicable reference rate(s) for the last five business days of an interest period will be the reference rate(s) on the ending reference rate date (as defined below) (unless otherwise set forth in the applicable Pricing Supplement), if the reference rate(s) on that date is (are) outside the reference rate range(s), you will not receive any interest in respect of those five days even if the reference rate(s), if actually calculated on any of those days, would be within the reference rate range(s).

There May Not Be an Active Trading Market for the Notes - Sales in the Secondary Market May Result in Significant Losses.

There may be little or no secondary market for the Notes. The Notes will not be listed on any securities exchange, unless otherwise disclosed in the applicable Pricing Supplement. Affiliates of the Bank and other dealers may make a market for the Notes; however, they are not required to do so. Affiliates of the Bank and other dealers may stop any market-making activities at any time. Even if a secondary market for the Notes develops, it may not provide significant liquidity or trade at prices advantageous to you. We expect that transaction costs in any secondary market would be high. As a result, the difference between bid and asked prices for your Notes in any secondary market could be substantial. **If you sell your Notes before maturity (as extended, if applicable), you may have to do so at a substantial discount from the issue price, and as a result, you may suffer substantial losses.**

You Must Rely on Your Own Evaluation of the Merits of an Investment Linked to the Applicable Reference Rate(s).

In the ordinary course of their business, we or our affiliates may have expressed views on expected movements in any reference rate, and may do so in the future. These views or reports may be communicated to our clients and clients of our affiliates. However, these views are subject to change from time to time. Moreover, other professionals who transact business in markets relating to any reference rate may at any time have significantly different views from those of us or our affiliates. For these reasons, you are encouraged to derive information concerning any applicable reference rate from multiple sources, and you should not rely solely on views expressed by us or our affiliates.

The Market Value of Your Notes May Be Influenced by Many Unpredictable Factors.

The following factors, which are beyond our control, may influence the market value of your Notes:

- *Changes in the level of the reference rate(s).* For example, if you purchase range accrual notes, an increase in the level of the reference rate could cause a decrease in the market value of the Notes because no interest will be payable on the Notes if the reference rate is outside the reference rate range. Conversely, a decrease in the level of the reference rate for any of the Notes could cause an increase in the market value of the Notes because interest will be payable (provided that the reference rate does not decrease below the lower end of the reference rate range). However, if the level of the reference rate decreases and remains low, the likelihood of the Notes being redeemed (if the Notes are redeemable) would increase. In all cases, the level of the reference rate itself will be influenced by complex and interrelated political, economic, financial and other factors that can affect the money markets generally and the London interbank market or other applicable market in particular.

- *Changes in interest rates.* In general, if interest rates increase, the market value of the Notes may decrease, and if interest rates decrease, the market value of the Notes may increase.
- *Volatility of the reference rate.* Depending on the terms of your Notes, if the size and frequency of fluctuations of the reference rate changes, the market value of the Notes may decrease.

These factors may influence the market value of your Notes if you sell your Notes before maturity (as extended, if applicable). Our creditworthiness, as represented by our credit ratings or as otherwise perceived in the market, will also affect the market value of your Notes. If you sell your Notes prior to maturity (as extended, if applicable), you may receive less and possibly substantially less, than the principal amount of your Notes.

The Method Used by the Publisher of a Reference Rate May Change in the Future.

The publisher of one or more of the reference rates for your Notes may change the manner in which a reference rate is calculated. Any such changes could occur after the issue date of your Notes, and may decrease the amounts of the payments that you receive on the Notes. Unless otherwise set forth in the applicable Pricing Supplement, we will not have any obligation to compensate you for any reductions of this kind.

For Certain Types of Notes, the Interest Rate Payable During the Initial Interest Period May Not Be Indicative of the Interest Rate Payable During the Subsequent Interest Period.

The interest rate of certain Notes that we may offer with this Offering Circular Supplement, may be based on a different rate during the initial interest period than in subsequent interest periods. In particular, during the interest period(s) where a fixed rate of interest (or other financial measure) applies, this fixed rate of interest (or other financial measure) may be higher than the floating rate of interest (or other financial measure) that will be applicable during subsequent interest period(s). As noted above, the interest rate during the any interest period where a floating rate of interest is applicable is uncertain and could be as little as 0.0%.

The Interest Rate on the Notes, if the Notes are "Capped," Will Be Limited.

If the applicable Pricing Supplement specifies that your Notes are "Capped," the interest rate payable on your Notes during any period will be limited to the Cap specified in the applicable Pricing Supplement. Therefore, the return you receive during any interest period may be less than what you would have received had you invested in a security linked to the reference rate that was not subject to the Cap.

The Inclusion in the Purchase Price of the Notes of a Selling Concession and of Our Cost of Hedging Our Market Risk under the Notes is Likely to Adversely Affect the Market Value of the Notes.

The price at which you purchase the Notes includes a selling concession, as well as the costs that we (or one of our affiliates) may incur in the hedging of our market risk under the Notes. The hedging costs include the expected cost of undertaking this hedge, as well as the profit that we (or our affiliates) expect to realize in consideration for assuming the risks inherent in providing the hedge. As a result, assuming no change in market conditions or any other relevant factors, the price, if any, at which you may be able to sell your Notes prior to maturity (as extended, if applicable) will likely be less than your original purchase price.

Trading Activities by The Bank or its Affiliates May Adversely Affect the Market Value of the Notes.

As described below under "*Use of Proceeds and Hedging*" and "*Use of Proceeds*" in the Offering Circular, we or one or more affiliates may but are not required to, hedge our obligations under the Notes by purchasing securities, futures, options or other derivative instruments with returns linked or related to changes in the level of the reference rate, and we may adjust these hedges by, among other things, purchasing or selling securities, futures, options or other derivative instruments at any time. There can be no assurance that any hedging transaction we or our affiliates may undertake with respect to our exposure under the Notes will be successful or will be maintained over the term of the Notes. It is possible that we or one or more of our affiliates could receive substantial returns from these hedging activities while the market value of the Notes declines. We or one or more of our affiliates may also issue or underwrite other securities or financial or derivative instruments with returns linked or related to changes in the performance of the applicable reference rate. By introducing competing products into the marketplace in this manner, we or one or more of our affiliates could adversely affect the market value of the Notes.

Historical Levels of the Reference Rate(s) Should Not Be Taken as an Indication of the Future Levels of Such Rate(s).

The historical performance of the reference rate(s), which may be included in the applicable Pricing Supplement, should not be taken as an indication of the future performance of the reference rate(s) during the term of the Notes. Changes in the level of the reference rate(s) will affect the trading price of the Notes, but it is impossible to predict whether the level of the reference rate(s) will rise or fall.

The Business Activities of The Bank or Its Affiliates May Create Conflicts of Interest.

As noted above, we and our affiliates expect to engage in trading activities related to the reference rate(s) that are not for the account of holders of the Notes or on their behalf. These trading activities may present a conflict between the holders' interest in the Notes and the interests we and our affiliates will have in our or their proprietary accounts, in facilitating transactions, including options and other derivatives transactions, for their customers and in accounts under their management. These trading activities could be adverse to the interests of the holders of the Notes.

There Are Potential Conflicts of Interest Between You and the Calculation Agent.

The calculation agent will, among other things, decide the amount of your payment for any interest payment date on the Notes. We may serve as the calculation agent. We may change the calculation agent after the original issue date without notice to you. For additional information as to the calculation agent's role, see "*Description of the Notes—Role of Calculation Agent*." The calculation agent will exercise its judgment when performing its functions and may take into consideration the Bank's ability to unwind any related hedges. Since this discretion by the calculation agent may affect payments on the Notes, the calculation agent may have a conflict of interest if it needs to make any such decision.

DESCRIPTION OF THE NOTES

*Please note that in this section entitled "Description of the Notes," references to "holders" mean those who own Notes registered in their own names, on the books that we or the trustee maintain for this purpose, and not those who own beneficial interests in Notes registered in street name or in Notes issued in book-entry form through The Depository Trust Company ("**DTC**") or another depositary. Owners of beneficial interests in the Notes should read the section entitled "Book-Entry Clearance Systems" in the Offering Circular.*

In addition to the terms described in the "*Summary*" section above and on the front and back cover of this Offering Circular Supplement, the following general terms will apply to the Notes, including your Notes:

Specified Currency

Unless otherwise specified in the relevant Pricing Supplement, all payments, if any, on the Notes will be made in U.S. dollars ("**$**").

Form and Denomination

Unless otherwise specified in the relevant Pricing Supplement, the Notes will be issued only in global form through DTC in minimum denominations of $1,000 and integral multiples of $1,000.

No Listing

Your Notes will not be listed or displayed on any securities exchange or included in any interdealer market quotation system, unless otherwise disclosed in the applicable Pricing Supplement.

Redemption

If the applicable Pricing Supplement specifies that the Notes are "**Redeemable**," we may redeem your Notes at a price equal to 100% of the principal amount plus accrued and unpaid interest to the redemption date on any payment date on or after the "**Call Effective Date**" specified in the applicable Pricing Supplement. If the applicable Pricing Supplement specifies that the Notes are "**Not Redeemable**," then we will not have the option to redeem your Notes, except as specified under "*Description of the Notes—Redemption and Repurchase—Redemption for Taxation Reasons*" in the Offering.

In certain circumstances where the redemption of the Notes would result in the Bank not meeting the TLAC requirements applicable to it pursuant to the TLAC Guideline (as defined in the Offering Circular), such redemption would be subject to the prior approval of the Superintendent of Financial Institutions as discussed in the Offering Circular under "*Description of the Notes — Redemption and Repurchase — Approval of Redemption, Repurchases and Defeasance; Amendments and Modifications*" with respect to Bail-inable Notes.

Cap

If the applicable Pricing Supplement specifies that the Notes are "**Capped**," the interest rate payable on your Notes during any interest period will be limited to the Cap specified in the applicable Pricing Supplement.

Floor

If the applicable Pricing Supplement specifies that the Notes have a "**Floor**," the interest rate payable on your Notes during any interest period will be no lower than the Floor specified in the applicable Pricing Supplement.

Defeasance, Default Amount, Other Terms

Neither full defeasance nor covenant defeasance will apply to your Notes. The following will apply to your Notes:

- the default amount payable on any acceleration of the maturity (as extended, if applicable) of your Notes as described under "**—***Default Amount on Acceleration*" below; and

- a business day for your Notes will have the meaning described under "**—***Special Calculation Provisions*" below.

Please note that the information about the settlement or pricing date, issue price discounts or commissions and net proceeds to the Bank in the relevant Pricing Supplement relates only to the initial issuance and sale of your Notes. If you have purchased your Notes in a market-making transaction after the initial issuance and sale, any such relevant information about the sale to you will be provided in a separate confirmation of sale.

Payment at Maturity

At maturity (as extended, if applicable), unless otherwise set forth in the applicable Pricing Supplement, you will receive the principal amount of your Notes, plus accrued and unpaid interest, if any, as described under "**—***Interest Payments*" below.

Maturity Date

The maturity date will be the date specified in the relevant Pricing Supplement, using the Applicable Business Day Convention set forth in the relevant Pricing Supplement. No interest will accrue past the maturity date (as extended, if applicable) specified in the relevant Pricing Supplement.

Extension of Maturity

If set forth in the applicable Pricing Supplement, the maturity date of the Notes may be subject to multiple extensions if the Issuer provides timely notice and the Extension Conditions are satisfied as described herein.

Interest Payments

General

The Notes, other than accrual notes, will bear interest from and including each interest payment date (or the issuance date of the Notes, as applicable) to but excluding the following interest payment date (or the maturity date (as extended, if applicable) or redemption date of the Notes, as applicable) (each, an "**interest period**") calculated in accordance with the applicable formula below, unless such formula is modified in the applicable Pricing Supplement.

Accrual Notes:

Accrual notes do not pay interest during the term of the Note. Interest compounds on the basis stated in the applicable Pricing Supplement at a rate calculated as follows:

$$\text{Interest rate} = R \times \left(\frac{N}{360}\right)$$

Where:

"R" is the reference rate (which will be a fixed rate) specified in the applicable Pricing Supplement; and

"N" is the total number of calendar days from and including the first date in the compounding period (or, in the case of the initial compounding period, the issue date) to but excluding the end of the compounding period (or, in the case of the final compounding period, the maturity date (as extended, if applicable)), assuming a calendar of twelve 30-day months.

Fixed Rate Notes:

$$\text{Interest rate} = R \times \left(\frac{N}{360}\right)$$

Where:

"R" is the reference rate (which will be a fixed rate) specified in the applicable Pricing Supplement; and

"N" is the actual number of calendar days from and including the last interest payment date (or the date of issue, for the initial interest period) to but excluding the next interest payment date or the maturity date (as extended, if applicable), as the case may be, assuming a calendar of twelve 30-day months.

Floating Rate Notes:

$$\text{Interest rate} = R \times \left(\frac{N}{360}\right)$$

Where:

"R" is the reference rate (which will be a floating rate) specified in the applicable Pricing Supplement; and

"N" is the actual number of calendar days from and including the last interest payment date (or the date of issue, for the initial interest period) to but excluding the next interest payment date or the maturity date (as extended, if applicable), as the case may be, assuming a calendar of twelve 30-day months.

Step Up Notes:

$$\text{Interest rate} = R \times \left(\frac{N}{360}\right)$$

Where:

"R" is the reference rate for that interest period as specified in the applicable Pricing Supplement; and

"N" is the actual number of calendar days from and including the last interest payment date (or the date of issue, for the initial interest period) to but excluding the next interest payment date or the maturity date (as extended, if applicable), as the case may be, assuming a calendar of twelve 30-day months.

Fixed-to-Floating Rate Notes:

During the initial interest period:

$$\text{Interest rate} = R_1 \times \left(\frac{N}{360}\right)$$

During the subsequent interest period:

$$\text{Interest rate} = R_2 \times \left(\frac{N}{360}\right)$$

Where:

"R_1" is the reference rate (which will be a fixed rate of interest) specified in the applicable Pricing Supplement;

"R_2" is the reference rate (which will be a floating rate of interest or other financial measure) specified in the applicable Pricing Supplement; and

"N" is the actual number of calendar days from and including the last interest payment date (or the date of issue, for the initial interest period) to but excluding the next interest payment date or the maturity date (as extended, if applicable), as the case may be, assuming a calendar of twelve 30-day months.

Floating-to-Fixed Rate Notes:

During the initial interest period:

$$\text{Interest rate} = R_1 \times \left(\frac{N}{360}\right)$$

During the subsequent interest period:

$$\text{Interest rate} = R_2 \times \left(\frac{N}{360}\right)$$

Where:

"R_1" is the reference rate (which will be a floating rate of interest or other financial measure) specified in the applicable Pricing Supplement;

"R_2" is the reference rate (which will be a fixed rate of interest) specified in the applicable Pricing Supplement; and

"N" is the actual number of calendar days from and including the last interest payment date (or the date of issue, for the initial interest period) to but excluding the next interest payment date or the maturity date (as extended, if applicable), as the case may be, assuming a calendar of twelve 30-day months.

Inverse Floating Rate Notes:

$$\text{Interest rate} = (F - R) \times \left(\frac{N}{360}\right)$$

Where:

"F" is the fixed rate of interest specified in the applicable Pricing Supplement;

"R" is the reference rate (which will be a floating rate) specified in the applicable Pricing Supplement; and

"N" is the actual number of calendar days from and including the last interest payment date (or the date of issue, for the initial interest period) to but excluding the next interest payment date or the maturity date (as extended, if applicable), as the case may be, assuming a calendar of twelve 30-day months.

Leveraged Notes:

$$\text{Interest rate} = \text{R} \times \text{L} \times \left(\frac{\text{N}}{360}\right)$$

Where:

"R" is the reference rate specified in the applicable Pricing Supplement;

"L" is the leverage rate specified in the applicable Pricing Supplement; and

"N" is the actual number of calendar days from and including the last interest payment date (or the date of issue, for the initial interest period) to but excluding the next interest payment date or the maturity date (as extended, if applicable), as the case may be, assuming a calendar of twelve 30-day months.

Range Accrual Notes:

$$\text{Interest rate} = \text{R} \times \left(\frac{\text{N}}{\text{D}}\right)$$

Where:

"R" is the fixed or floating rate of interest (or other financial measure) specified in the applicable Pricing Supplement for that interest period;

"N" is the total number of calendar days in the applicable interest period on which the reference rate is within the reference rate range; provided, however, that the reference rate on any non-business day will be equal to the reference rate (as defined below) on the immediately preceding business day; and provided further, that the reference rate for any day from and including the fifth business day preceding the related interest payment date for any interest period shall be the reference rate as in effect on the ending reference rate date; and

"D" is the total number of calendar days in the applicable interest period.

The "ending reference rate date" for any interest period and with respect to an interest payment date is the fifth business day preceding such interest payment date (or the maturity date (as extended, if applicable) or redemption date of the Notes, as applicable).

The "reference rate" will be the rate specified in the applicable Pricing Supplement.

The "reference rate range" will be specified in the applicable Pricing Supplement.

"N" will not increase with respect to any day on which the reference rate is not within the reference rate range. Interest will be calculated on the basis of a 360-day year consisting of twelve 30-day months.

Dual Range Accrual Notes:

$$\text{Interest rate} = \text{R} \times \left(\frac{\text{N}}{\text{D}}\right)$$

Where:

"R" is the fixed or floating rate of interest (or other financial measure) specified in the applicable Pricing Supplement for that interest period;

"N" is the total number of calendar days in the applicable interest period on which each of two specified reference rates are within the reference rate range(s); provided, however, that the reference rates on any non-business day will be equal to the reference rates on the immediately preceding business day; and provided further, that the reference rates for any day from and including the fifth business day preceding the related interest payment date for any interest period shall be the reference rates as in effect on the ending reference rate date (as defined below); and

"D" is the total number of calendar days in the applicable interest period.

The "ending reference rate date" for any interest period and with respect to an interest payment date is the fifth business day preceding such interest payment date (or the maturity date (as extended, if applicable) or redemption date of the Notes, as applicable).

The "reference rates" will be the rates specified in the applicable Pricing Supplement.

The "reference rate range(s)" will be specified in the applicable Pricing Supplement.

"N" will not increase with respect to any day on which the reference rates are not within the reference rate range(s). Interest will be calculated on the basis of a 360-day year consisting of twelve 30-day months.

Non-Inversion Range Accrual Notes:

$$\text{Interest rate} = R \times \left(\frac{N}{D}\right)$$

Where:

"R" is the fixed or floating rate of interest (or other financial measure) specified in the applicable Pricing Supplement for that interest period;

"N" is the total number of calendar days in the applicable interest period on which the high-side reference rate exceeded the low-side reference rate by an amount equal to or above minimum spread level specified in the applicable Pricing Supplement; provided, however, that the reference rate on any non-business day will be equal to the reference rate on the immediately preceding business day; and provided further, that for the last four business days before such interest payment date, the low-side reference rate and the high-side reference rate will be determined by reference to their levels on the ending reference rate date; and

"D" is the total number of calendar days in the applicable interest period.

The "ending reference rate date" for any interest period and with respect to an interest payment date is the fifth business day preceding such interest payment date (or the maturity date (as extended, if applicable) or redemption date of the Notes, as applicable).

The "reference rate" will be the rate specified in the applicable Pricing Supplement.

"N" will not increase with respect to any day on which the high-side reference rate does not exceed the low-side reference rate. Interest will be calculated on the basis of a 360-day year consisting of twelve 30-day months.

Leveraged Steepener Notes:

During the initial interest period (if the applicable Pricing Supplement provides for an initial interest period):

$$\text{Interest rate} = R_1 \times \left(\frac{N_1}{360}\right)$$

During subsequent interest periods (or, if the applicable Pricing Supplement does not provide for an initial interest period, on each interest payment date during the term of the Notes):

$$\text{Interest rate} = R_2 \times (H - L) \times \left(\frac{N_2}{360}\right)$$

Where:

The interest rate can never be less than 0.00%, but may be subject to a Cap;

"R_1" is the rate of interest (if specified in the applicable Pricing Supplement) and "R_2" is the Leverage Factor (or other financial measure) specified in the applicable Pricing Supplement (where R_1 will be a fixed rate);

"H" is the high-side reference rate specified in the applicable Pricing Supplement, set five business days prior to the beginning of the interest period;

"L" is the low-side reference rate specified in the applicable Pricing Supplement, set five business days prior to the beginning of the interest period;

"N_1" is the actual number of calendar days from and including the last interest payment date (or the date of issue, for the initial interest period) to but excluding the next interest payment date or the maturity date (as extended, if applicable), as the case may be, assuming a calendar of twelve 30-day months; and

"N_2" is the actual number of calendar days from and including the last interest payment date (or the date of issue, for the initial interest period) to but excluding the next interest payment date or the maturity date (as extended, if applicable), as the case may be, assuming a calendar of twelve 30-day months.

The "ending reference rate date" for any interest period and with respect to an interest payment date is the fifth business day preceding such interest payment date (or the maturity date (as extended, if applicable) or redemption date of the Notes, as applicable).

The "reference rate" will be the rate specified in the applicable Pricing Supplement.

The "reference rate range" will be specified in the applicable Pricing Supplement.

Default Amount on Acceleration

If an Event of Default (as defined in the Offering Circular) occurs and the maturity (as extended, if applicable) of the Notes is accelerated, we will pay to you on the acceleration date, unless otherwise set forth in the applicable Pricing Supplement, your principal amount, together with accrued and unpaid interest through the date of acceleration.

Manner of Payment and Delivery

Any payment on the Notes at maturity (as extended, if applicable) will be made to accounts designated by you and approved by us, or at the office of the trustee in New York City. The payment at maturity (as extended, if applicable) will only be made when the Notes are surrendered to the trustee at that office. We also may make any payment or delivery in accordance with the applicable procedures of the depositary.

Role of Calculation Agent

The calculation agent will make all determinations regarding the reference rate and the amount payable on your Notes. Absent manifest error, all determinations of the calculation agent will be final and binding on you and us, without any liability on the part of the calculation agent.

We are currently serving as the calculation agent for the Notes. We may change the calculation agent for your Notes at any time without notice and the calculation agent may resign as calculation agent at any time upon 30 days' written notice to the Bank.

Special Calculation Provisions

Business Day

When we refer to a business day with respect to your Notes, we mean a day that is a business day of the kind described as a "Modified Following Business Day Convention" in the Offering Circular unless otherwise set forth in the applicable Pricing Supplement. If the relevant Pricing Supplement specifies a different meaning for the term business day, we will use that modified definition in determining each interest payment date as well as the maturity date (as extended, if applicable) for your Notes, all as described in this Offering Circular Supplement.

USE OF PROCEEDS AND HEDGING

We will use the net proceeds we receive from the sale of the Notes for the purposes we describe in the Offering Circular under "*Use of Proceeds*." We or our affiliates may also use those proceeds in transactions intended to hedge our obligations under the Notes as described below.

In anticipation of the sale of the Notes, we or our affiliates expect, but are not required, to enter into hedging transactions involving purchases of securities or over-the-counter derivative instruments linked to the applicable reference rate(s) prior to or on the pricing date. From time to time, we or our affiliates may enter into additional hedging transactions or unwind those we have entered into.

We or our affiliates may acquire a long or short position in securities similar to the Notes from time to time and may, in our or their sole discretion, hold or resell those similar securities. We or our affiliates may close out our or their hedge on or before the maturity date (as extended, if applicable).

The hedging activity discussed above may adversely affect the market value of the Notes from time to time. See "Additional Risk Factors Specific to the Notes—Trading Activities by the Bank or its Affiliates May Adversely Affect the Market Value of the Notes" and "—The Business Activities of the Bank or its Affiliates May Create Conflicts of Interest" in this Offering Circular Supplement for a discussion of these adverse effects.

HISTORICAL REFERENCE RATE INFORMATION

We may provide historical information on the applicable reference rate(s) in the relevant Pricing Supplement. You should not take any such historical information concerning the reference rate(s) as an indication of the future levels of such rates.

SUPPLEMENTAL DISCUSSION OF CANADIAN TAX CONSEQUENCES

An investor should read carefully the description of principal Canadian federal income tax considerations under "*Taxation— Canadian Federal Income Taxation*" in the Offering Circular relevant to a holder acquiring debt securities. The principal Canadian federal income tax considerations of an issuance of Notes will be described particularly in the relevant Pricing Supplement for such Notes. The description of the Canadian federal income tax considerations under "*Taxation— Canadian Federal Income Taxation*" in the Offering Circular will be superseded by the Pricing Supplement to the extent indicated in the Pricing Supplement.

SUPPLEMENTAL DISCUSSION OF U.S. FEDERAL INCOME TAX CONSEQUENCES

For a discussion of U.S. federal income tax consequences to holders of the Notes, holders should refer to the section entitled "*Taxation—United States Federal Income Taxation*" in the Offering Circular and the relevant section in the applicable Pricing Supplement.

ERISA AND CERTAIN OTHER U.S. BENEFIT PLAN INVESTOR CONSIDERATIONS

For a discussion of ERISA considerations applicable to holders of the Notes, noteholders should refer to the section entitled "*ERISA and Certain Other U.S. Benefit Plan Investor Considerations*" in the Offering Circular.

NATIONAL BANK OF CANADA

RATE-LINKED NOTES

Fixed Rate Notes	**Inverse Floating Rate Notes**
Floating Rate Notes	**Leveraged Notes**
Step Up Notes	**Range Accrual Notes**
Accrual Notes	**Dual Range Accrual Notes**
Fixed-to-Floating Rate Notes	**Non-Inversion Range Accrual Notes**
Floating-to-Fixed Rate Notes	**Leveraged Steepener Notes**

May 1, 2019