Pricing Supplement
(To Offering Circular dated June 9, 2020)
January 19, 2023

NATIONAL BANK OF CANADA

(as Issuer)

NATIONAL BANK OF CANADA, NEW YORK BRANCH

(as Guarantor)

U.S.$6,000,000 Callable Notes Due January 24, 2028

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*National Bank of Canada, a Canadian chartered bank ("**we**," "**us**" or the "**Bank**"), is offering pursuant to the offering circular dated June 9, 2020 (the "**Offering Circular**") and this pricing supplement (the "**Pricing Supplement**"), the Callable Notes (the "**Notes**"). The Notes will have the following terms:*

Principal Amount:	$6,000,000
Trade Date:	January 19, 2023
Issue Date:	January 24, 2023
Stated Maturity Date:	January 24, 2028
CUSIP:	63305LQJ5
Optional Redemption Dates:	Semi-annually on July 24 and January 24 of each year, beginning on July 24, 2023 and ending on July 24, 2027.
Optional Redemption Price:	100% of the principal amount
Interest Rate (per annum):	6.00%
Interest Payment Dates:	Semi-annually on July 24 and January 24 of each year during the term of the Notes, beginning on July 24, 2023 and ending on the Stated Maturity Date.

The Notes are Bail-inable Notes (as defined in the accompanying Offering Circular) and 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 Canada Deposit Insurance Corporation Act (the "CDIC Act") and to variation or extinguishment in consequence, and subject to 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 Notes. See "Description of the Notes—Special Provisions Related to Bail-inable Notes" and "Risk Factors—Factors That Are Material for the Purpose of Accessing the Risks Involved in an Investment in the Notes—Bail-inable Notes" in the Offering Circular.

Investing in the Notes involves risks not associated with an investment in ordinary debt securities. See "*Risk Factors*" beginning on page 6 of the Offering Circular and page PS-5 herein for a discussion of certain risk factors to be considered in connection with an investment in the Notes. All payments on the Notes are subject to the credit risk of the Bank and the Guarantor.

The Notes will be offered to the public at 100% of the principal amount ($1,000 per note). The public offering price will include accrued interest from January 24, 2023, if settlement occurs after that date. The purchase price of the Notes to the Agent will be 99.592% of the principal amount of the Notes. See "Supplemental Plan of Distribution" below.

The Notes 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 Pricing Supplement. Any representation to the contrary is a criminal offense.

The Notes will initially be offered and sold pursuant to an exemption from registration provided by Section 3(a)(2) of 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 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 (except 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.

The Notes 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 Notes are not otherwise guaranteed by any person.

InspereX LLC

NOTICE TO INVESTORS

Any recipient of (i) this Pricing 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, the Guarantor, the Agent or the Trustee to subscribe for or purchase any Note. You should determine for yourself the relevance of the information contained or incorporated by reference in this Pricing 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 the Guarantor 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 the 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. Neither the Agent nor the Trustee undertakes any obligation to advise you of any information coming to the attention of any of the Agent or the Trustee, as the case may be.

The distribution of this Pricing 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 the Guarantor or the Agent which would permit a public offering of the Notes or distribution of this Pricing 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 Pricing 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 the Agent has represented that all offers and sales by them will be made on the same terms. Persons into whose possession this Pricing Supplement comes are required by the Bank, the Guarantor, the Trustee and the Agent 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 Pricing Supplement and other offering material relating to the Notes in Canada, the United States, the EEA and the United Kingdom, Hong Kong, Japan and Singapore, see "Notice to Investors" and "*Plan of Distribution and Conflicts of Interest*" in the Offering Circular. This Pricing 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.

All references in this Pricing 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$," "CAD" or "Canadian dollars" are to the currency of Canada. In the documents incorporated by reference in this Pricing Supplement, unless otherwise specified herein or the context otherwise requires, references to "$" are to Canadian dollars.

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.

SUMMARY OF TERMS AND CONDITIONS

The following terms and conditions describe the Notes that we are offering pursuant to this Pricing Supplement and the accompanying Offering Circular. You should read these terms together with the additional information contained in this Pricing Supplement and the accompanying Offering Circular.

GENERAL

Notes:	Callable Notes (the "**Notes**")
Rating of the Notes:	We expect that the Notes will be rated as "A3" (Moody's), "BBB+" (S&P) and "A+" (Fitch). A credit rating reflects the creditworthiness of the Bank and is not a recommendation to buy, sell or hold the Notes, and it may be subject to revision or withdrawal at any time by the assigning rating organization. The Notes themselves have not been independently rated. Each rating should be evaluated independently of any other rating.
CUSIP/ISIN:	63305LQJ5 / US63305LQJ51
Issuer:	National Bank of Canada (the "**Issuer**" or the "**Bank**")
Guarantor:	National Bank of Canada, New York Branch.
Issue Price:	100% of the principal amount
Minimum Denominations:	$1,000 and multiples of $1,000 in excess of $1,000
Specified Currency:	U.S. Dollars ("**USD**")
Aggregate Principal Amount Initially Being Issued:	$6,000,000
Trade Date:	January 19, 2023
Issue Date:	January 24, 2023
Stated Maturity Date:	January 24, 2028, provided, however, if such day is not a business day, the Stated Maturity Date will be the next following business day, and no adjustment will be made to any amount payable on the Stated Maturity Date in respect of such adjustment.
Interest Rate:	6.00% per annum ($30.00 per semi-annual period per Note).
Day Count Fraction:	30/360, unadjusted. For the avoidance of doubt, each month is deemed to have 30 days and the year is deemed to have 360 days. Therefore, each semi-annual interest period is deemed to have 180 days and the year is deemed to have 360 days, resulting in equal interest payments.
Interest Payment Dates:	Semi-annually on July 24 and January 24 of each year during the term of the Notes, beginning on July 24, 2023 and ending on the Stated Maturity Date, provided, however, if such day is not a business day, the applicable Interest Payment Date will be the next following business day, and no adjustment will be made to the amount of interest payable on the applicable Interest Payment Date

	in respect of such adjustment. The Interest Payment Dates are each subject to postponement as set forth in the Offering Circular.
Optional Early Redemption:	The Issuer has the right (not the obligation) on each Optional Redemption Date to purchase the Notes from the Noteholders at the Optional Redemption Price. To exercise this redemption option, the Issuer will send a written notice to the Trustee for delivery to Noteholders no later than 10 Business Days prior to an Optional Redemption Date.
Optional Redemption Dates:	Semi-annually on July 24 and January 24 of each year, beginning on July 24, 2023 and ending on July 24, 2027, provided, however, if such day is not a business day, the applicable Optional Redemption Date will be the next following business day, and no adjustment will be made to any amount payable on the applicable Optional Redemption Date in respect of such adjustment. The Optional Redemption Dates are each subject to postponement as set forth in the Offering Circular.
Optional Redemption Price:	100% of the principal amount plus any accrued and unpaid interest.
Final Redemption Amount:	If the Notes are not previously redeemed, at maturity you will receive the principal amount plus any accrued and unpaid interest.
Business Day Convention:	Following Business Day
Financial Centers for Business Day Convention:	New York and Toronto
Record Dates for Interest Payments:	The close of business on the date that is three Business Days preceding the relevant Interest Payment Date.
Canadian Bail-in Powers:	The Notes are Bail-inable Notes (as defined in the accompanying Offering Circular) and 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 Canada Deposit Insurance Corporation Act (the "CDIC Act") and to variation or extinguishment in consequence, and subject to 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 Notes. See "Description of the Notes—Special Provisions Related to Bail-inable Notes" and "Risk Factors—Factors That Are Material for the Purpose of Accessing the Risks Involved in an Investment in the Notes—Bail-inable Notes" in the Offering Circular.
Agreement with Respect to the Exercise of Canadian Bail-in Powers:	By its acquisition of an interest in any Note, each holder or beneficial owner of that Note is deemed to (i) agree to be bound, in respect of the Notes, by the CDIC Act, including the conversion of the 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 Notes 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 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; and (iii) acknowledge and agree that the terms referred to in paragraphs (i) and (ii), above, are binding on that holder or beneficial owner despite any provisions in the indenture or the Notes, any other law that governs the Notes and any other

	agreement, arrangement or understanding between that holder or beneficial owner and the Bank with respect to the Notes. Holders and beneficial owners of Notes will have no further rights in respect of their Bail-inable Notes to the extent those Bail-inable Notes are converted in a bail-in conversion, other than those provided under the bail-in regime, and by its acquisition of an interest in any Note, each holder or beneficial owner of that Note is deemed to irrevocably consent to the converted portion of the principal amount of that Note and any accrued and unpaid interest thereon being deemed paid in full by the Bank by the issuance of common shares of the Bank (or, if applicable, any of its affiliates) upon the occurrence of a bail-in conversion, which bail-in conversion will occur without any further action on the part of that holder or beneficial owner or the trustee; provided that, for the avoidance of doubt, this consent will not limit or otherwise affect any rights that holders or beneficial owners may have under the bail-in regime. See "Description of the Notes—Special Provisions Related to Bail-inable Notes" and "Risk Factors—Factors That Are Material for the Purpose of Accessing the Risks Involved in an Investment in the Notes—Bail-inable Notes" in the Offering Circular for a descriptions of provisions applicable to the Notes as a result of Canadian bail-in powers.
Survivor's Option:	Not Applicable
Taxation:	The Issuer intends to treat the Notes as debt for U.S. federal income tax purposes issued with no more than de minimis original issue discount. Please see the discussion in the Offering Circular under "Taxation—United States Federal Income Taxation." In addition, since the filing of the offering circular on June 9, 2020, the Minister of Finance (Canada) has released certain proposals to amend the Income Tax Act (Canada) on April 29, 2022 with respect to "hybrid mismatch arrangements" (the "Hybrid Mismatch Proposals") which, if enacted, could, where certain conditions are met, have an adverse impact on the Canadian tax treatment to a holder to the extent any amount paid or payable to a holder in respect of the notes is considered to be the deduction component of a "hybrid mismatch arrangement" under which the payment arises within the meaning of proposed paragraph 18.4(3)(b) of the Income Tax Act (Canada) contained in the "Hybrid Mismatch Proposals". Holders should note that the Hybrid Mismatch Proposals are in consultation form, are highly complex, and there remains significant uncertainty as to their interpretation and application. There can be no assurance that the Hybrid Mismatch Proposals will be enacted in their current form, or at all. Should any payments with respect to the notes become subject to Canadian withholding tax by reason of the application of the rules contained in the Hybrid Mismatch Proposals, the Bank will withhold tax at the applicable statutory rate and will not make payments of any additional amounts as described in the section entitled "Description of the Notes — Payments of Additional Amounts" in the accompanying offering circular.
Form of the Notes:	The Notes will be held in global form by The Depository Trust Company.
Trustee and Paying Agent and Registrar:	The Bank of New York Mellon
Calculation Agent:	National Bank of Canada
Agent:	InspereX LLC

Listing:	The Notes will not be listed on any securities exchange.

ADDITIONAL TERMS OF YOUR NOTES

You should read this Pricing Supplement together with the Offering Circular dated June 9, 2020, which is attached hereto. Capitalized terms used but not defined in this Pricing Supplement will have the meanings given to them in the Offering Circular. In the event of any conflict, this Pricing Supplement will control. ***The Notes may vary from the terms described in the Offering Circular in several important ways. You should read this Pricing Supplement carefully.***

This Pricing Supplement, together with Offering Circular, contains the terms of the Notes and supersedes all prior or contemporaneous oral statements as well as any other written materials including preliminary or indicative pricing terms, correspondence, trade ideas, structures for implementation, sample structures, brochures or other educational materials of ours. You should carefully consider, among other things, the matters set forth in "Risk Factors" in the Offering Circular, as the Notes involve risks not associated with conventional debt securities. We urge you to consult your investment, legal, tax, accounting and other advisors for investment in the Notes.

RISK FACTORS

The Notes involve risks not associated with an investment in ordinary fixed rate notes. This section describes the most significant risks relating to the terms of the Notes. You should carefully consider whether the Notes are suited to your particular circumstances when purchasing them. The Offering Circular describes additional risk factors set forth under "*Risk Factors*" therein that could affect your investment in or return on the Notes that you should also consider.

Early redemption risk.

We have the option to redeem the Notes on the Call Dates set forth above. It is more likely that we will redeem the Notes prior to their Stated Maturity Date to the extent that the interest payable on the Notes is greater than the interest that would be payable on our other instruments of a comparable maturity, terms and credit rating trading in the market. If the Notes are redeemed prior to their Stated Maturity Date, you may have to re-invest the proceeds in a lower rate environment.

Payments on the Notes are subject to the credit risk of the Bank and the Guarantor, and the value of the Notes will be affected by a credit rating reduction of the Bank or the Guarantor.

The amounts payable on the Notes are dependent upon the ability of the Bank or the Guarantor to repay its obligations on the applicable payment dates. No assurance can be given as to what the financial condition of the Bank or the Guarantor will be on the applicable payment dates. The value of the Notes is expected to be affected, in part, by investors' general appraisal of the creditworthiness of the Bank and the Guarantor, and actual or anticipated changes in the credit ratings of the Bank and the Guarantor prior to the due date. Such perceptions are generally influenced by the ratings accorded to the outstanding Notes of the Bank and the Guarantor by standard statistical rating services. A reduction (or anticipated reduction) in the rating, if any, accorded to outstanding debt securities of the Bank or the Guarantor by one of these rating agencies could result in a reduction in the trading value of the Notes. As the return on the Notes depends upon factors in addition to the ability of the Bank and the Guarantor to pay their respective obligations, an improvement in these credit ratings will not reduce the other investment risks related to the Notes. A credit rating is not a recommendation to buy, sell, or hold any of the Notes, and may be subject to suspension, change, or withdrawal at any time by the assigning rating agency.

The Notes Will Be Subject to Risks, Including 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 Canadian Bank Resolution Powers.

Under Canadian bank resolution powers, the Canada Deposit Insurance Corporation (the "CDIC") may, in circumstances where the Bank has ceased, or is about to cease, to be viable, assume temporary control or ownership of the Bank and may be granted broad powers by one or more orders of the Governor in Council (Canada), including the power to sell or dispose of all or a part of the assets of the Bank, and the power to carry out or cause the Bank to carry out a transaction or a series of transactions the purpose of which is to restructure the business of the Bank. If the CDIC were to take action under the Canadian bank resolution powers with respect to the Bank, this could result in holders or beneficial owners of the Notes being exposed to losses and conversion of the 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.

As a result, you should consider the risk that you may lose all or part of your investment, including the principal amount plus any accrued interest, if the CDIC were to take action under the Canadian bank resolution powers, including the bail-in regime, and that any remaining outstanding Notes, or common shares of the Bank or any of its affiliates into which the Notes are converted, may be of little value at the time of a bail-in conversion and thereafter. See "Description of the Notes—Special Provisions Related to Bail-inable Notes" and "Risk Factors—Factors That Are Material for the Purpose of Accessing the Risks Involved in an Investment in the Notes—Bail-inable Notes" in the Offering Circular for a description of provisions and risks applicable to the Notes as a result of Canadian bail-in powers.

The inclusion of dealer spread and projected profit from hedging in the original issue price is likely to adversely affect secondary market prices.

Assuming no change in market conditions or any other relevant factors, the price, if any, at which the Agent or any other party is willing to purchase the Notes at any time in secondary market transactions will likely be significantly lower than the original issue price, since secondary market prices are likely to exclude underwriting commissions paid with respect to the Notes and the cost of hedging our obligations under the Notes that are included in the original issue price. The cost of hedging includes the projected profit that we and/or our affiliates may realize in consideration for assuming the risks inherent in managing the hedging transactions. These secondary market prices are also likely to be reduced by the costs of unwinding the related hedging transactions. In addition, any secondary market prices may differ from values determined by pricing models used by the Agent as a result of dealer discounts, mark-ups or other transaction costs.

The Notes will not be listed on any securities exchange or any inter-dealer quotation system; there may be no secondary market for the notes; potential illiquidity of the secondary market.

The Notes are most suitable for purchasing and holding to maturity or the Optional Redemption Date, as applicable. The Notes will be new securities for which there is no trading market. The Notes will not be listed on any organized securities exchange or any inter-dealer quotation system. We cannot assure you as to whether there will be a trading or secondary market for the Notes or, if there were to be such a trading or secondary market, that it would be liquid.

Under ordinary market conditions, the Agent or any of its affiliates may (but are not obligated to) make a secondary market for the Notes and may cease doing so at any time. Because we do not expect other broker-dealers to participate in the secondary market for the Notes, the price at which you may be able to trade your Notes is likely to depend on the price, if any, at which the Agent or any of its affiliates are willing to transact. If none of the Agent or any of its affiliates makes a market for the Notes, there will not be a secondary market for the Notes. Accordingly, we cannot assure you as to the development or liquidity of any secondary market for the Notes. If a secondary market in the Notes is not developed or maintained, you may not be able to sell your Notes easily or at prices that will provide you with a yield comparable to that of similar securities that have a liquid secondary market.

In addition, the principal amount of the Notes being offered may not be purchased by investors in the initial offering, and the Agent or one or more of our other affiliates may agree to purchase any unsold portion. the Agent or such affiliate or affiliates intend to hold the Notes, which may affect the supply of the Notes available in any secondary

market trading and therefore may adversely affect the price of the Notes in any secondary market trading. If a substantial portion of any Notes held by the Agent or our other affiliates were to be offered for sale following this offering, the market price of such Notes could fall, especially if secondary market trading in such Notes is limited or illiquid.

SUPPLEMENTAL PLAN OF DISTRIBUTION

The Notes are being offered by the Bank through InspereX LLC, as the Agent, who will purchase the Notes, as principal, from the Bank at the price disclosed on the cover page of this document, for resale to investors and other purchasers. With respect to notes purchased for advisory accounts, the Agent may forego some or all of their fees or commissions and the public offering price for investors purchasing the notes in these accounts may be as low as the amount set forth on the cover hereof.

The Agent may use this Pricing Supplement in the initial sale of the Notes. In addition, the Agent or any other of its affiliates may use this Pricing Supplement in a market-making transaction in a note after its initial sale. Unless the Agent or its agent informs the purchaser otherwise in the confirmation of sale, this Pricing Supplement is being used in a market-making transaction.

NATIONAL BANK OF CANADA

(as Issuer)

NATIONAL BANK OF CANADA, NEW YORK BRANCH

(as Guarantor)

Up to U.S.$3,500,000,000 Structured Notes

National Bank of Canada, a Canadian chartered bank ("**we**," "**us**" or the "**Bank**"), may from time to time offer up to U.S.$3,500,000,000 in aggregate principal amount of notes (the "**Notes**") in one or more series under the U.S.$3,500,000,000 Structured Note Program (the "**Program**"). National Bank of Canada, New York Branch (the "**Guarantor**") has agreed to unconditionally and irrevocably guarantee payments of interest and principal under the Notes (the "**Guarantee**"), which constitutes the direct, unsecured and unsubordinated obligations of the Guarantor. The Bank is licensed by the Superintendent under the New York Banking Law to maintain a branch office in New York State.

The aggregate principal amount of Notes outstanding under the Program at any time will not exceed U.S. $3,500,000,000 (or its equivalent in other currencies).

This Offering Circular is being used in connection with the offering of the Notes.

The terms of each series of Notes (each, a "**Series**") will be set out in a pricing supplement (each, a "**Pricing Supplement**") to this Offering Circular. Such terms will include: (i) the aggregate principal amount of the offering, and the price at which the Notes will be offered; (ii) the amount payable on the Notes at their maturity date (the "**Redemption Amount**"); (iii) the interest or coupon (if any) payable on the Notes; and (iv) the maturity date of the Notes. The Notes may also be offered using one or more "**Product Supplements**," which set forth their general terms. We refer herein to a Pricing Supplement or a Product Supplement as a "**Supplement**." In relation to any Series of Notes, this Offering Circular shall also be read and construed together with the applicable Supplement.

An investment in the Notes involves certain risks. See "*Risk Factors*" commencing on page 6 for a discussion of certain risk factors to be considered in connection with an investment in the Notes. Payments on the Notes are subject to the credit risk of the Bank and the Guarantor.

National Bank of Canada Financial Inc. ("**NBCFI**"), which is an affiliate of the Bank, may be an Agent for an offering of the Notes. See "*Plan of Distribution and Conflicts of Interest*" for further information.

The Notes and the related Guarantee under the Program will not, and are not required to, be registered with the Securities and Exchange Commission (the "**SEC**") under the U.S. 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 be offered and sold pursuant to an exemption from registration under the Securities Act provided by Section 3(a)(2) thereof. See "*Description of the Notes*" for a description of the manner in which Notes will be issued. The Notes are subject to certain restrictions on transfer; see "*Notice to Investors*" and "*Plan of Distribution and Conflicts of Interest.*"

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. Notes that are Bail-inable Notes (as defined herein) are subject to the Canadian bank resolution powers as discussed under "Description of the Notes—Canadian Bank Resolution Powers" in this Offering Circular. The Guarantee will constitute the direct, general, unconditional, unsecured and unsubordinated obligation of the Guarantor and will rank equally with all other present and future direct, general, unconditional, unsecured and unsubordinated obligations of the Guarantor, except those mandatorily preferred by law.

The Notes under the Program are not bank deposits insured or guaranteed by the U.S. 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) (the "Bank Act"), 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 and the Guarantee are not otherwise guaranteed by any person.

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 subject to the application of the laws of Canada or of a province thereof in respect of the operation of the CDIC Act.

Agents

National Bank of Canada Financial Inc.

As well as any other Agents the Bank may appoint from time to time, as specified in the applicable Supplement.

The date of this Offering Circular is June 9, 2020.

NOTICE TO INVESTORS

The Notes have not been, and are not required to be, registered with the SEC under the Securities Act. The Notes will be offered pursuant to the exemption from registration provided by Section 3(a)(2) of the Securities Act and will be represented by one or more global notes (the "Global Notes").

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

This Offering Circular is being provided on a confidential basis 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.

"Offering Circular" means this document along with all documents incorporated by reference herein.

Any recipient of (i) this Offering Circular 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, the Guarantor, any Agent or the Trustee (each as defined herein) 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, 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 the Guarantor 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 of the Agents or the Trustee, as the case may be.

The distribution of this Offering Circular 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 the Guarantor or any Agent which would permit a public offering of the Notes or distribution of this Offering Circular 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 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 the Agents have represented that all offers and sales by them will be made on the same terms. Persons into whose possession this Offering Circular comes are required by the Bank, the Guarantor, the Trustee and the 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 and other offering material relating to the Notes in Canada, the United States, the European Economic Area (the "EEA") and the United Kingdom, Hong Kong, Japan and Singapore, see "*Plan of Distribution and Conflicts of Interest—Selling Restrictions*" below. This Offering Circular 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.

This Offering Circular has been prepared on the basis that any offer of Notes in any member state of the EEA and the United Kingdom (each, a "Relevant State") will be made pursuant to an exemption under the European Union's Regulation (EU) 2017/1129 (the "Prospectus Regulation"), from the requirement to publish a prospectus for offers of Notes. Accordingly, any person making or intending to make an offer in that Relevant State of the Notes which are the subject of an offering contemplated in this Offering Circular as completed by the applicable Supplement in relation to the offer of those Notes may only do so in circumstances in which no obligation arises for the Bank or any Agent to publish a prospectus pursuant to Article 3 of the Prospectus Regulation or supplement a prospectus pursuant to Article 23 of the Prospectus Regulation, in each case, in relation to such offer. Any person making or intending to make an offer in a Relevant State of the Notes which are the subject of the offering contemplated by this Offering Circular and the applicable Supplement may only do so to one or more Qualified Investors (as defined in the Prospectus Regulation). None of the Bank, the Guarantor, the Trustee, or the Agents has authorized, nor do they authorize, the making of any offer or Notes in circumstances in which an obligation arises for the Bank or any Agent to publish or supplement a prospectus for such offer.

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 or in the United Kingdom. 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 Regulation (EU) 2017/1129 (the "Prospectus Regulation"). 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 or in the United Kingdom has been prepared and therefore offering or selling the Notes or otherwise making them available to any retail investor in the EEA or in the United Kingdom 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 (as defined herein) 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 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$," "CAD" or "Canadian dollars" are to the currency of Canada. In the documents incorporated by reference in this Offering Circular, unless otherwise specified herein or the context otherwise requires, references to "$" are to Canadian dollars.

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

References to Regulations or Directives include, in relation to the United Kingdom, those Regulations or Directives as they form part of United Kingdom domestic law by virtue of the European Union (Withdrawal) Act 2018 or have been implemented in United Kingdom domestic law, as appropriate.

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.*"

FORWARD-LOOKING STATEMENTS

From time to time, the Bank makes written and oral forward-looking statements, such as those contained in the "Economic Review and Outlook" section of its Annual Report for the year ended October 31, 2019 (the "2019 Annual Report"), 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 2020 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 2020 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's 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 58 of the 2019 Annual Report and in the Risk Management section beginning on page 28 of the Bank's Quarterly Report for the six-month period ended April 30, 2020 (the "2020 Second Quarterly Report"), and more specifically, 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; 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; potential disruptions to the Bank's information technology systems, including evolving cyber-attack risk; and possible impacts of catastrophic events affecting local and global economies, including public health emergencies and natural disasters.

The foregoing list of risk factors is not exhaustive. Additional information about these factors can be found in the Risk Management section of the 2019 Annual Report and the 2020 Second Quarterly Report, and under "Risk Factors". 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 Guarantor, the Trustee, the 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.

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DOCUMENTS INCORPORATED BY REFERENCE

We incorporate by reference into this Offering Circular (i) the documents listed below which have previously been published by the Bank and filed with the Canadian securities regulatory authorities, (ii) any existing and future update to any of the documents listed below, (iii) all of the Bank's Annual Information Forms, Annual Reports and quarterly Reports to Shareholders that the Bank will publish and file with the Canadian securities regulatory authorities in the future, (iv) all of the Bank's non-confidential material change reports that the Bank will publish and file with the Canadian securities regulatory authorities in the future and (v) any other documents published by the Bank or the Guarantor that specifically state that they are being incorporated by reference into this Offering Circular:

(a) The Bank's Annual Information Form dated December 3, 2019, excluding all information incorporated therein by reference (such information is not relevant for prospective investors or is covered elsewhere in this Offering Circular) (the "**2019 Annual Information Form**"), including the following sections:

  (i) information about the corporate structure and general development of the business on pages 4 to 6 of the 2019 Annual Information Form;

  (ii) information concerning the directors and executive officers on pages 14 to 15 of the 2019 Annual Information Form; and

  (iii) a discussion of the guidelines for the management of services provided by the independent auditor and information on fees for the independent auditor's services on page 19 of the 2019 Annual Information Form;

(b) the following sections of the Bank's Annual Report for the year ended October 31, 2019 (the "**2019 Annual Report**"):

  (i) Management's Discussion and Analysis of the Bank for the fiscal year ended October 31, 2019 on pages 13 to 110 of the 2019 Annual Report;

  (ii) a description of the Bank's capital stock on pages 180 to 182 of the 2019 Annual Report;

  (iii) information concerning the shares outstanding and the dividends declared on page 181 and 182 of the 2019 Annual Report; and

  (iv) information concerning principal subsidiaries of the Bank on page 203 of the 2019 Annual Report;

(c) pages 111 through 211 of the Bank's 2019 Annual Report, comprising the Bank's audited consolidated financial statements for the years ended October 31, 2019 and 2018, together with the notes thereto and the independent auditor's report thereon dated December 3, 2019 included therein;

(d) the following sections of the 2020 Second Quarterly Report:

  (i) Management's Discussion and Analysis of the Bank for the six-month period ended April 30, 2020 on pages 3 to 44 of the 2020 Second Quarterly Report; and

  (ii) information concerning the Bank's share capital, the shares outstanding and the dividends on page 77 of the 2020 Second Quarterly Report.

(e) pages 45 through 83 of the 2020 Second Quarterly Report, comprising the Bank's unaudited interim condensed consolidated financial statements for the six-month period ended April 30, 2020, together with the notes thereto;

The documents listed above are available electronically on SEDAR (www.sedar.com) under National Bank of Canada.

OVERVIEW OF THE PROGRAM

The following is only a summary of the Program and is qualified in its entirety by the section entitled "Description of the Notes."

Issuer:	National Bank of Canada (the "**Bank**," "**we**" or "**us**").
Guarantor:	National Bank of Canada, New York Branch.
Trustee and Paying Agent and Registrar:	The Bank of New York Mellon.
Calculation Agent:	Unless otherwise specified in the applicable Supplement, the Bank or one of its affiliates will be the Calculation Agent for determining all amounts payable under the Notes, and making any other required determinations.
Program:	We may use this Offering Circular to issue from time to time Notes having an aggregate principal amount of up to U.S.$3,500,000,000 (or its equivalent in other currencies). The terms of each series of Notes (each, a "**Series**"), including the final offer price and the amount of such Notes, will be determined by the Bank and the relevant Agents and will be set out in the relevant Supplement.
Agent:	NBCFI, as well as any other Agents the Bank may appoint from time to time, as specified in the applicable Supplement.
Issue Price:	Notes may be issued at par or at a discount from or premium over par, in each case as specified in the applicable Supplement.
Specified Currencies:	Notes may be denominated in any currency agreed between the Bank and the applicable Agent(s) and specified in the applicable Supplement, subject to compliance with all applicable legal and regulatory restrictions.
Maturity:	The maturity agreed between the Bank and the relevant Agent(s) and specified in the applicable Supplement, subject to such minimum or maximum maturities as may be allowed or required from time to time by the Bank's organizational documents and any relevant regulator (or equivalent body) or any laws or regulations applicable to the Bank or the Guarantor.
Interest:	Notes may bear interest at a fixed or floating rate, as specified in the applicable Supplement and may vary during the lifetime of the relevant Series. We may also issue Notes that do not bear interest.
Fixed Rate Notes:	"**Fixed Rate Notes**" will bear interest at a fixed rate which will be payable on such date or dates as may be agreed between the Bank and the relevant Agent(s) and on redemption and will be calculated on the basis of such Day Count Fraction as may be agreed between the Bank and the relevant Agent(s) (as set out in the applicable Supplement).
Floating Rate Notes:	"**Floating Rate Notes**" will bear interest at a rate determined: (i) on the same basis as the floating rate that would have applied if the Issuer had entered into a schedule and confirmation and credit support annex, if applicable, for the relevant Series of Notes in the relevant Specified Currency entered into by the Bank and the holder of such Notes incorporating the International Swaps and Derivatives Association, Inc. ("**ISDA**") Definitions;

	(ii) on the basis of a reference rate appearing on the agreed screen page of a commercial quotation service; (iii) for SOFR Rate Notes (as defined below), on the basis of a base rate determined in accordance with the provisions described under "*Description of the Notes—Interest—Floating Rate Notes—SOFR Rate Notes;"* or (iv) on such other basis as may be agreed between the Bank and the relevant Agent(s), plus a margin (the "**Margin**"), if any, as set out in the applicable Supplement. The Margin may be a positive or negative number, which will be agreed between the Bank and the relevant Agent(s) for each Series of Floating Rate Notes as set out in the applicable Supplement.
Other Notes:	We may issue other types of Notes, including Notes that pay interest at a fixed rate for one or more periods, and a floating rate for one or more periods. We may also issue Notes that have payments of principal and/or interest that depend upon the level of a reference asset, such as one or more indices, exchange traded funds, equity securities, commodities, futures contracts, exchange rates, or other assets, or a basket of any of the foregoing. We may issue Notes that provide that we may deliver to you certain securities in lieu of a cash payment. We may issue Notes that are redeemable at our option or at your option, or that are automatically redeemable upon the occurrence of certain events. In each case, the relevant terms will be set forth in the applicable Supplement.
Denomination:	As specified in the applicable Supplement.
Status of the Notes:	The Notes will constitute deposits for purposes of the Bank Act and 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. Notes that are Bail-inable Notes (as defined herein) are subject to the Canadian bank resolution powers as discussed under *"Description of the Notes—Canadian Bank Resolution Powers"* in this Offering Circular.
Bail-inable Notes:	We will specify in the applicable Pricing Supplement whether or not 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.* " **The Notes will not be deposits insured under either the *Canada Deposit Insurance Corporation Act* (Canada) or the U.S. Federal Deposit Insurance Act.**
Guarantee:	The payments of interest and principal are (after giving effect to all the applicable cure periods) irrevocably and unconditionally guaranteed by the Guarantor pursuant to the Guarantee. The Guarantee, however, does not obligate the Guarantor or any other party to make a secondary market in the Notes or to make any payments with respect to any secondary market transactions. See "*The Guarantee*."

Status of the Guarantee:	The Guarantee will constitute the direct, general, unconditional, unsecured and unsubordinated obligation of the Guarantor and will rank equally with all other present and future direct, general, unconditional, unsecured and unsubordinated obligations of the Guarantor, except those mandatorily preferred by law.
Form of the Notes:	The Notes will be issued in registered global form as described in "*Description of the Notes*." The Notes will be registered in the name of a nominee of The Depository Trust Company ("**DTC**"), and deposited on behalf of the purchaser (or such other account as the purchaser may direct) with The Bank of New York Mellon as custodian for DTC. Purchasers of Notes will have a book-entry beneficial interest in the Global Notes. The beneficial interest in the Global Notes will be held through the Direct Participants and Indirect Participants (as defined in "*Book-Entry Clearance Systems*"), including, if applicable, CDS Clearing and Depository Services Inc. ("**CDS**"), Euroclear Bank, S.A./N.V. ("**Euroclear**") and Clearstream Banking, *société anonyme* ("**Clearstream**"). Notes in definitive form will only be issued in limited circumstances. See "*Description of the Notes.*"
Listing:	Unless otherwise specified in the applicable Supplement, the Notes of any Series will not be listed on any securities exchange.
No Registration; Selling Restrictions:	The Notes and the Guarantee will not, and are not required to, be registered with the SEC under the Securities Act. Accordingly, the Notes may not be offered, sold or otherwise transferred except pursuant to an exemption from the registration requirements of the Securities Act and any applicable state securities laws. The Notes will be offered and sold in reliance upon an exemption from registration provided by Section 3(a)(2) of the Securities Act. See "*Notice to Investors.*" The Notes are subject to additional selling and transfer restrictions described under "*Plan of Distribution and Conflicts of Interest.*"
Taxation:	Payments in respect of the Notes will be made without withholding or deduction for, or on account of, any present or future taxes, duties, assessments or governmental charges of whatever nature imposed or levied, unless the withholding or deduction of such taxes, duties, assessments or governmental charges is required by law. In the event that any amounts are required to be deducted or withheld for, or on behalf of Canada or any province or territory thereof, the Bank will (save in certain circumstances) pay such additional amounts as will result in the holders of the Notes receiving such amounts as they would have received in respect of such Notes had no such withholding or deduction been required. See "*Description of the Notes — Payments of Additional Amounts*." For a more detailed description on taxation see "*Taxation*."
ERISA:	Subject to the limitations described under "*ERISA and Certain Other U.S. Benefit Plan Considerations*," a Note may be purchased by Benefit Plan Investors (as defined in Section 3(42) of the U.S. Employee Retirement Income Security Act of 1974, as amended ("**ERISA**")).
Governing Law and Jurisdiction:	The Notes and the Indenture will be governed by, and construed in accordance with, the laws of the State of New York. See "*Description of the Notes*," except that, with respect to Bail-inable Notes, refer to "*Description of the Notes—Special Provisions Related to Bail-inable Notes.*"
Use of Proceeds:	Unless otherwise specified in the applicable Supplement, we intend to use the net proceeds we receive from the sale of the Notes for general corporate purposes. In

	addition, we expect that we or our affiliates may use a portion of the net proceeds to hedge our obligations under the Notes. See "*Use of Proceeds.*"
Distribution:	The Bank may sell Notes issued pursuant to this Offering Circular (i) directly to one or more purchasers, (ii) through the Agents or (iii) through a combination of any of these methods of sale. The applicable Supplement will explain the ways in which the Bank intends to sell a specific issue of Notes, including the names of any Agents and details of the pricing of the issue of Notes, as well as any commissions, concessions or discounts such Bank is granting the Agents.
Conflicts of Interest:	Agents we may use in connection with the offer and sale of any Series of Notes may include our affiliate, NBCFI. Any such offering will be conducted in compliance with the requirements of Rule 5121 (as amended from time to time) of the Financial Industry Regulatory Authority, Inc. ("**FINRA**") regarding a FINRA member firm's distribution of securities of an affiliate.
Risk Factors:	There are certain risks related to the Notes, which you should ensure you fully understand. A non-exhaustive summary of such risks is set out under "*Risk Factors*" beginning on page 6 of this Offering Circular.

RISK FACTORS

We believe that the following risk factors are material for the purpose of assessing risks associated with the Notes, the Bank and the Guarantor. All of these factors are contingencies which may or may not occur and we are not in a position to express a view on the likelihood of any such contingency occurring or the likelihood or extent to which any such contingencies may affect the ability of the Bank or the ability of the Guarantor to pay interest, principal or other amounts on or in connection with any Notes. In addition, factors, although not exhaustive, which could be material for the purpose of assessing the market risk associated with the Notes are described below. Furthermore, the applicable Supplement may describe additional risk factors that could affect your investment in or return on the Notes that you should also consider.

We believe that the factors described below represent certain risks inherent in investing in the Notes, but our inability or the inability of the Guarantor to pay interest, principal or other amounts on or in connection with any Notes or to perform any of its obligations may occur for other reasons, and neither we nor the Guarantor represents that the statements below regarding the risks of holding any Notes are exhaustive. The risks described below are not the only risks faced by us and the Guarantor. Additional risks and uncertainties, including those not presently known to us or the Guarantor or that we currently believe to be immaterial, could also have a material impact on our business and could adversely affect our ability or the ability of the Guarantor to pay interest, principal or other amounts on or in connection with any Notes or to perform any of our obligations. You should also read the detailed information set out elsewhere in this Offering Circular (including information incorporated by reference herein) or the applicable Supplement to reach your own views prior to making any investment decisions.

An investment in the Notes is subject to various risks including those risks inherent in conducting the business of a diversified financial institution. Before deciding whether to invest in any Notes, you should consider carefully the risks incorporated by reference in this Offering Circular (including subsequently filed documents incorporated by reference) and, if applicable, those described in a Supplement relating to a specific offering of Notes. You should consider the categories of risks identified and discussed in the Bank's 2019 Annual Information Form and Management's Discussion and Analysis of the Bank incorporated herein by reference and in particular under the heading "Risk Management" in the 2019 Annual Report and the 2020 Second Quarterly Report, as well as the risks discussed in any subsequent documents that are incorporated by reference herein.

Factors That Are Material for the Purpose of Assessing Risks Relating to the Bank and the Guarantor

Payments on the Notes are subject to the credit risk of the Bank and the Guarantor, and the value of the Notes will be affected by a credit rating reduction of the Bank or the Guarantor.

The amounts payable on the Notes are dependent upon the ability of the Bank or the Guarantor to repay its obligations on the applicable payment dates. No assurance can be given as to what the financial condition of the Bank or the Guarantor will be on the applicable payment dates. The value of the Notes is expected to be affected, in part, by investors' general appraisal of the creditworthiness of the Bank and the Guarantor, and actual or anticipated changes in the credit ratings of the Bank and the Guarantor prior to the due date. Such perceptions are generally influenced by the ratings accorded to the outstanding Notes of the Bank and the Guarantor by standard statistical rating services. A reduction (or anticipated reduction) in the rating, if any, accorded to outstanding debt securities of the Bank or the Guarantor by one of these rating agencies could result in a reduction in the trading value of the Notes. As the return on the Notes depends upon factors in addition to the ability of the Bank and the Guarantor to pay their respective obligations, an improvement in these credit ratings will not reduce the other investment risks related to the Notes. A credit rating is not a recommendation to buy, sell, or hold any of the Notes, and may be subject to suspension, change, or withdrawal at any time by the assigning rating agency.

The Guarantee provides limited economic benefits.

The purpose of the Guarantee is to permit the Notes to be offered and sold without registration in the United States in reliance on the exemption from registration provided by Section 3(a)(2) of the Securities Act. Should the Bank default on the Notes, creditors impacted by such default may assert claims against the Bank and/or the Guarantor. While the obligations of the Guarantor under the Guarantee are unconditional and are not limited in amount, the Guarantee provides limited economic benefit to investors as there is no obligation on the Guarantor to maintain assets in excess of the principal amount of the Notes and at any time the amount of the Guarantor's obligations under the Guarantee may far exceed the Guarantor's financial capacity to pay under the Guarantee.

In the event the New York branch of the Bank is closed and the Bank does not arrange for an appropriate substitute guarantor, you may be adversely affected.

In the event that the New York branch of the Bank is closed as a result of any events other than insolvency or any other events described in the definition of Events of Default below, either voluntarily by the Bank or involuntarily, the Bank is under no obligation to arrange for a substitute guarantor and such closure will not result in an event of default under the Notes. In such circumstances, you may find that the market for such Notes is less liquid than previously was the case and/or that the market price of such Notes is adversely affected either as a result thereof or because such Notes no longer benefit from the Guarantee or from the provisions of Section 606 of the New York Banking Law.

Supervisory action may adversely affect the return on the Notes.

The Superintendent or the Federal Reserve Board may, as the result of an examination or otherwise, cause the Guarantor to make changes in its business operations or financial position that could in turn affect the ability of the Guarantor to perform on the Guarantee.

In the event of an insolvency of the Bank, the assets of the Guarantor may be subject to separate insolvency proceedings in New York.

The Bank is licensed by the Superintendent under the New York Banking Law to maintain a branch office in New York State. In the event that the Bank becomes insolvent, the Superintendent may take possession of the Guarantor and all of the assets of the Bank that are located in New York under Section 606 of the New York Banking Law. Under such circumstances, an accepted claim under the Guarantee would be an unsecured liability of the Guarantor. Although the New York Banking Law provides that the assets of the Guarantor would, in the first instance, be marshaled to pay the accepted claims of creditors of the Guarantor, there can be no assurance that a Noteholder would receive full payment of its claim or that payment would not be delayed because of the Superintendent's actions. Furthermore, because of the contingent nature of such claims under Section 606 of the New York Banking Law, it is uncertain whether Noteholders would have a provable claim under the Guarantee with respect to payment of principal and interest in a receivership for the Guarantor to the extent that, at the time of the commencement of the proceedings the conditions to payment under the Guarantee had not occurred. See "Event of Default and Remedies; Waiver of Past Defaults—Event of Default and Remedies".

Factors That Are Material for the Purposes of Assessing the Risks Involved in an Investment in the Notes

Bail-inable Notes

The Notes will be subject to risks, including non-payment in full or, in the case of Bail-inable Notes, 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 Canadian bank resolution powers.

Under Canadian bank resolution powers, the Canada Deposit Insurance Corporation ("**CDIC**") may, in circumstances where the Bank has ceased, or is about to cease, to be viable, assume temporary control or ownership of the Bank and may be granted broad powers by one or more orders of the Governor in Council (Canada), each of which we refer to as an "**Order**," including the power to sell or dispose of all or a part of the assets of the Bank, and the power to carry out or cause the Bank to carry out a transaction or a series of transactions the purpose of which is to restructure the business of the Bank. As part of the Canadian bank resolution powers, certain provisions of and regulations under the Bank Act, the CDIC Act and certain other Canadian federal statutes pertaining to banks, which we refer to collectively as the "**Bail-in Regime**," provide for a bank recapitalization regime for banks designated by the Superintendent of Financial Institutions (Canada) (the "**Superintendent of Financial Institutions**") as domestic systemically important banks, which include the Bank. We refer to those domestic systemically important banks as "**D-SIBs**." See "*Description of the Notes—Canadian Bank Resolution Powers*" for a description of the Canadian bank resolution powers, including the Bail-in Regime.

If the CDIC were to take action under the Canadian bank resolution powers with respect to the Bank, this could result in holders or beneficial owners of the Notes being exposed to losses and, in the case of Bail-inable Notes, conversion of the 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, which we refer to as a "**Bail-in Conversion**." Subject to certain exceptions discussed under "*Description of the Notes—Canadian Bank Resolution Powers*", including for certain structured notes, senior debt issued on or after September 23, 2018, with an initial or amended term to maturity (including explicit or embedded options) greater than 400 days, that is unsecured or partially secured and that has been assigned a CUSIP or ISIN or similar identification number, is subject to Bail-in Conversion.

Upon a Bail-in Conversion, if your Bail-inable Notes or any portion thereof are converted into common shares of the Bank or any of its affiliates, you will be obligated to accept those common shares, even if you do not at the time consider the common shares to be an appropriate investment for you, and despite any change in the Bank or any of its affiliates, or the fact that the common shares may be issued by an affiliate of the Bank, or any disruption to or lack of a market for the common shares or disruption to capital markets generally.

As a result, you should consider the risk that you may lose all of your investment, including the principal amount plus any accrued interest, if the CDIC were to take action under the Canadian bank resolution powers, including the Bail-in Regime, and that any remaining outstanding Notes, or common shares of the Bank or any of its affiliates into which Bail-inable Notes are converted, may be of little value at the time of a Bail-in Conversion and thereafter.

The Indenture (as defined below) will provide only limited acceleration and enforcement rights for the Notes and includes other provisions intended to qualify Bail-inable Notes as TLAC of the Bank.

In connection with the Bail-in Regime, the Office of the Superintendent of Financial Institutions' ("**OSFI**") guideline (the "**TLAC Guideline**") on Total Loss Absorbing Capacity ("**TLAC**") applies to and establishes standards for D-SIBs, including the Bank. Under the TLAC Guideline, beginning November 1, 2021, the Bank is required to maintain a minimum capacity to absorb losses composed of unsecured external long-term debt that meets the prescribed criteria or regulatory capital instruments to support recapitalization in the event of a failure. Bail-inable Notes and regulatory capital instruments that meet certain prescribed criteria, which are discussed under "*Description of the Notes—Canadian Bank Resolution Powers*", will constitute TLAC of the Bank.

In order to comply with the TLAC Guideline, the Indenture under which the Notes may be issued provides that, for any Notes of a series issued on or after the date of the First Supplemental Indenture (including Notes that are not subject to Bail-in Conversion), acceleration will only be permitted (i) if we default in the payment of the principal of, or interest on, any Note of that series and, in each case, the default continues for a period of 30 business days, or (ii) certain bankruptcy, insolvency or reorganization events occur.

Holders and beneficial owners of Bail-inable Notes may only exercise, or direct the exercise of, the rights described under "*Description of Debt Securities — Events of Default and Remedies; Waiver of Past Defaults — Events of Default and Remedies*" where an Order has not been made under Canadian bank resolution powers pursuant to subsection 39.13(1) of the CDIC Act in respect of the Bank. Notwithstanding the exercise of those rights, Bail-inable Notes will continue to be subject to Bail-in Conversion until repaid in full.

The Indenture also provides that holders or beneficial owners of Bail-inable Notes will not be entitled to exercise, or direct the exercise of, any set-off or netting rights with respect to Bail-inable Notes. In addition, where an amendment, modification or other variance that can be made to the Indenture or the Bail-inable Notes would affect the recognition of those Bail-inable Notes by the Superintendent of Financial Institutions as TLAC, that amendment, modification or variance will require the prior approval of the Superintendent of Financial Institutions.

The circumstances surrounding a Bail-in Conversion are unpredictable and can be expected to have an adverse effect on the market price of Bail-inable Notes.

The decision as to whether the Bank has ceased, or is about to cease, to be viable is a subjective determination by the Superintendent of Financial Institutions that is outside the control of the Bank. Upon a Bail-in Conversion, the interests of depositors and holders of liabilities and securities of the Bank that are not converted will effectively all rank in priority to the portion of Bail-inable Notes that are converted. In addition, except as provided for under the compensation process, the rights of holders in respect of the Bail-inable Notes that have been converted will rank on parity with other holders of common shares of the Bank (or, as applicable, common shares of the affiliate whose common shares are issued on the Bail-in Conversion).

There is no limitation on the type of Order that may be made where it has been determined that the Bank has ceased, or is about to cease, to be viable. As a result, you may be exposed to losses through the use of Canadian bank resolution powers other than Bail-in Conversion or in liquidation. See "*The Notes will be subject to risks, including non-payment in full or, in the case of Bail-inable Notes, 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 Canadian bank resolution powers.*" above.

Because of the uncertainty regarding when and whether an Order will be made and the type of Order that may be made, it will be difficult to predict when, if at all, Bail-inable Notes could be converted into common shares of the Bank or any of its affiliates, and there is not likely to be any advance notice of an Order. As a result of this uncertainty, trading behavior in respect of the Bail-inable Notes may not follow trading behavior associated with convertible or exchangeable securities or, in circumstances where the Bank is trending towards ceasing to be viable, other senior debt. Any indication, whether real or perceived, that the Bank is trending towards ceasing to be viable can be expected to have an adverse effect on the market price of the Bail-inable Notes, whether or not the Bank has ceased, or is about to cease, to be viable. Therefore, in those circumstances, you may not be able to sell your Bail-inable Notes easily or at prices comparable to those of senior debt securities not subject to Bail-in Conversion.

The number of common shares to be issued in connection with, and the number of common shares that will be outstanding following, a Bail-in Conversion are unknown. It is also unknown whether the shares to be issued will be those of the Bank or one of its affiliates.

Under the Bail-in Regime there is no fixed and pre-determined contractual conversion ratio for the conversion of the Bail-inable Notes, or other shares or liabilities of the Bank that are subject to a Bail-in Conversion, into common shares of the Bank or any of its affiliates, nor are there specific requirements regarding whether liabilities subject to a Bail-in Conversion are converted into common shares of the Bank or any of its affiliates. CDIC determines the timing of the Bail-in Conversion, the portion of bail-inable shares and liabilities to be converted and the terms and conditions of the conversion, subject to parameters set out in the Bail-in Regime, which are discussed under "*Description of the Notes—Canadian Bank Resolution Powers.*"

As a result, it is not possible to anticipate the potential number of common shares of the Bank or its affiliates that would be issued in respect of any Bail-inable Note converted in a Bail-in Conversion, the aggregate number of such common shares that will be outstanding following the Bail-in Conversion, the effect of dilution on the common shares received from other issuances under or in connection with an Order or related actions in respect of the Bank or its affiliates or the value of any common shares you may receive for your converted Bail-inable Notes, which could be significantly less than the principal amount of those Bail-inable Notes. It is also not possible to anticipate whether shares of the Bank or shares of its affiliates would be issued in a Bail-in Conversion. There may be an illiquid market, or no market at all, in the common shares issued upon a Bail-in Conversion and you may not be able to sell those common shares at a price equal to the value of your converted Bail-inable Notes and as a result may suffer significant losses that may not be offset by compensation, if any, received as part of the compensation process. Fluctuations in exchange rates may exacerbate those losses.

By acquiring Bail-inable Notes, you are deemed to agree to be bound by a Bail-in Conversion and so will have no further rights in respect of your Bail-inable Notes to the extent those Bail-inable Notes are converted in a Bail-in Conversion other than those provided under the Bail-in Regime. Any potential compensation to be provided through the compensation process under the CDIC Act is unknown.

The CDIC Act provides for a compensation process for holders of Bail-inable Notes who immediately prior to the making of an Order, directly or through an intermediary, own Bail-inable Notes that are converted in a Bail-in Conversion. Given the considerations involved in determining the amount of compensation, if any, that a holder that held Bail-inable Notes may be entitled to following an Order, it is not possible to anticipate what, if any, compensation would be payable in such circumstances. By acquiring an interest in any Bail-inable Note, you are deemed to agree to be bound by a Bail-in Conversion and so will have no further rights in respect of your Bail-inable Notes to the extent those Bail-inable Notes are converted in a Bail-in Conversion other than those provided under the Bail-in Regime. See "*Description of the Notes—Canadian Bank Resolution Powers*" herein for a description of the compensation process under the CDIC Act.

Following a Bail-in Conversion, holders or beneficial owners that held Bail-inable Notes that have been converted will no longer have rights against the Bank as creditors.

Upon a Bail-in Conversion, the rights, terms and conditions of the portion of Bail-inable Notes that are converted, including with respect to priority and rights on liquidation, will no longer apply as the portion of converted Bail-inable Notes will have been converted on a full and permanent basis into common shares of the Bank or any of its affiliates ranking on parity with all other outstanding common shares of that entity. If a Bail-in Conversion occurs, then the interest of the depositors, other creditors and holders of liabilities of the Bank not bailed in as a result of the Bail-in Conversion will all rank in priority to those common shares.

Given the nature of the Bail-in Conversion, holders or beneficial owners of Bail-inable Notes that are converted will become holders or beneficial owners of common shares at a time when the Bank's and potentially its affiliates' financial condition has deteriorated. They may also become holders or beneficial owners of common shares at a time when the relevant entity may have received or may receive a capital injection or equivalent support with terms that may rank in priority to the common shares issued in a Bail-in Conversion with respect to payment of dividends, rights on liquidation or other terms although there is no certainty that any such capital injection or support will be forthcoming.

The Bank may redeem Bail-inable Notes after the occurrence of a TLAC Disqualification Event.

If a TLAC Disqualification Event (as defined herein) is specified in the applicable Pricing Supplement, we may, at our option, with the prior approval of the Superintendent of Financial Institutions, redeem all but not less than all of the particular Bail-inable Notes prior to their stated maturity date after the occurrence of the TLAC Disqualification Event, at the time or times and at the redemption price or prices specified in that Pricing Supplement, together with unpaid interest accrued thereon to, but excluding, the date fixed for redemption. If the Bank redeems Bail-inable Notes, you may not be able to reinvest the redemption proceeds in securities offering a comparable anticipated rate of return. Additionally, although the terms of Bail-inable Notes are anticipated to be established to satisfy the TLAC criteria within the meaning of the TLAC Guideline to which the Bank is subject, it is possible that any Bail-inable Notes may not satisfy the criteria in future rulemakings or interpretations.

Sustainable Notes

Notes issued as "green notes," "social notes" or "sustainable notes" may not be a suitable investment for all investors seeking exposure to green, social or sustainable assets.

As specified in the applicable Pricing Supplement, the Bank may issue Notes under the Program where the use of proceeds is specified in the applicable Pricing Supplement to be for the financing and/or refinancing, in whole or in part, of future or existing eligible businesses and eligible projects, including the Bank's own operations, that fall within the Eligible Categories (as defined below), in accordance with the Bank's Sustainability Bond Framework dated September 26, 2018 (as may amended from time to time), available on the following webpage: https://www.nbc.ca/content/dam/bnc/a-propos-de-nous/relations-investisseurs/fonds-propres-et-dette/nbc-sustainability-bond-framework.pdf (the "**Framework**"). See further under "Use of Proceeds–Sustainability Bond Framework." We refer to any such Notes, which may be "green notes," "social notes" or "sustainable notes," as the "**Sustainable Notes.**"

The Bank will exercise its judgement and sole discretion in determining the businesses and projects that will be financed by the proceeds of the Sustainable Notes. If the use of the proceeds of the Sustainable Notes is a factor in your decision to invest in the Sustainable Notes, you should consider the disclosure in "Use of Proceeds" set out in the Offering Circular and in the applicable Pricing Supplement, together with the terms and conditions of the Framework, and consult with your legal or other advisers before making an investment in Sustainable Notes (including with respect to whether you require a current second party opinion on the Framework). Any failure by the Bank to apply the net proceeds of the notes in accordance with the Framework, any withdrawal, termination or expiration of any report, assessment, opinion or certification as described above, or any such report, assessment, opinion or certification attesting that the Bank is not complying in whole or in part with any matters with respect to such report, assessment, opinion or certification is reporting, assessing, opining or certifying, may have a material adverse effect on the value of the notes and/or result in adverse consequences to you, including if you have a portfolio mandate to invest in securities to be used for a particular purpose. While it is the intention of the Bank to meet the Framework,

no assurance is given that any of the businesses and projects funded with the proceeds from Sustainable Notes will meet the Framework or an investor's expectations or requirements, whether as to sustainable impact or outcome or otherwise.

Furthermore, while the intention of the Bank is to apply the net proceeds of the relevant Sustainable Notes as described in "Use of Proceeds" set out in the applicable Pricing Supplement, there is no contractual obligation to allocate the proceeds of such Sustainable Notes to finance eligible businesses and projects or to provide annual progress reports as described in the Framework.

The Bank's failure to so allocate or report, the failure of any of the businesses and projects funded with the proceeds from Sustainable Notes to meet the Framework or the failure of external assurance providers to opine on the conformity of the Sustainability Bond Report (as defined below) with the Framework will not constitute an Event of Default with respect to the relevant Sustainable Notes or give rise to any other claim of a holder of such Sustainable Notes against the Bank. Any such failure may affect the value of the relevant Sustainable Notes and/or have adverse consequences for certain investors with portfolio mandates to invest in sustainable, social or green assets or for a particular purpose.

Furthermore, it should be noted that there is currently no clear definition (legal, regulatory or otherwise) of, nor market consensus as to what constitutes, a "green", "sustainable", "social" or an equivalently labelled project or business, nor as to what precise attributes are required for a particular project or business to be defined as "green", "sustainable", "social" or such other equivalent label nor can any assurance be given that such a clear definition or consensus will develop over time. Accordingly, while it is the intention of the Bank, no assurance is or can be given by the Bank, the Arrangers or the Agents to investors that any projects or uses the subject of, or related to, any of the businesses and projects funded with the proceeds from the Notes will meet any or all investor expectations regarding such "green", "sustainable", "social" or other equivalently-labelled performance objectives or that any adverse environmental, social and/or other impacts will not occur during the implementation of any projects or uses the subject of, or related to, any of the businesses and projects funded with the proceeds from the Notes.

None of the Bank, the Guarantor, the Arrangers or the Agents makes any representation as to the suitability of the Sustainable Notes to fulfil any green, environmental, sustainable, social or other criteria required by prospective investors, or as to the suitability or reliability for any purpose whatsoever of any report, assessment, opinion or certification of any third party (whether or not solicited by the Bank) which may be made available in connection with the issue of Sustainable Notes and in particular with any of the businesses and projects funded with the proceeds from Sustainable Notes to fulfil any environmental, sustainability, social and/or other criteria. For the avoidance of doubt, none of the Framework, the second party opinion or any other report, assessment, opinion or certification of any third party (whether or not solicited by the Bank) is, nor shall they be deemed to be, incorporated in and/or form part of the Offering Circular nor the applicable Pricing Supplement. Any such report, assessment, opinion or certification is not, nor should be deemed to be, a recommendation by the Bank, the Arrangers, the Agents or any other person to buy, sell or hold Sustainable Notes. The second party opinion and any such other report, assessment, opinion or certification of any third party (whether or not solicited by the Bank) is only current as at the date that it was initially issued. Investors must determine for themselves the relevance of any such report, assessment, opinion or certification and/or the information contained therein and/or the provider of such opinion or certification for the purpose of any investment in Sustainable Notes. The providers of such reports, assessments, opinions and certifications are not currently subject to any specific regulatory or other regime or oversight. None of the Arrangers or the Agents have undertaken, nor are they responsible for, any assessment of the Framework or the eligibility criteria for the Sustainable Notes, any verification of whether any of the businesses or projects fall within the Eligible Categories, or the monitoring of the use of proceeds of the Sustainable Notes. Investors should refer to the Framework and the Sustainability Bond Report (details of which are set out under "Use of Proceeds" in this Offering Circular), together with the second party opinion, available at:https://www.nbc.ca/content/dam/bnc/a-proposde-nous/relations-investisseurs/fonds-propres-et-dette/nbc-sustainability-bond-second-opinion.pdf. for information. Neither the second party opinion nor the contents of such website are incorporated by reference into this Offering Circular.

While it is the intention of the Bank to apply the net proceeds of any Sustainable Notes and obtain and publish the relevant reports, assessments, opinions and certifications in, or substantially in, the manner described in "Use of Proceeds" set out in this Offering Circular or in the applicable Pricing Supplement, there can be no assurance that the Bank will be able to do this nor can there be any assurance that any eligible project (where applicable) will be

completed within any specified period or at all or with the results or outcome (whether or not related to the environment) as originally expected or anticipated by the Bank.

Any failure by the Bank to apply the net proceeds of any issued of Sustainable Notes in accordance with the Framework, any withdrawal of any report, assessment, opinion or certification as described above, or any such report, assessment, opinion or certification attesting that the Bank is not complying in whole or in part with any matters for which such report, assessment, opinion or certification is reporting, assessing, opining or certifying on, may have a material adverse effect on the value of such Sustainable Notes and/or result in adverse consequences for certain investors with portfolio mandates to invest in securities to be used for a particular purpose.

Obligations under the Notes and the Guarantee

The Notes and the Guarantee will not represent obligations or be the responsibilities of any of the Agents, the Trustee, or any other person involved in or associated with the Notes, or their officers, directors, employees, security holders or incorporators, other than the Bank and the Guarantor, as applicable. Each of the Bank and the Guarantor will be liable solely in its corporate capacity for their respective obligations in respect of the Notes and the Guarantee, as applicable, and such obligations will not be the obligations of any of their respective officers, directors, employees, security holders or incorporators, as the case may be.

The Bank is liable to make payments when due on the Notes.

The Bank is liable to make payments when due on the Notes. The Notes constitute deposit liabilities of the Bank for purposes of the Bank Act, but will not be insured under the *Canada Deposit Insurance Corporation Act* (Canada), and will constitute legal, valid and binding direct, unconditional, unsubordinated and unsecured obligations of the Bank and rank equally with all deposit liabilities of the Bank without any preference among themselves and equally with all other unsubordinated and unsecured obligations of the Bank, present and future (except as otherwise prescribed by law). Notes that are Bail-inable Notes are subject to the Canadian bank resolution powers as discussed under "*Description of the Notes—Canadian Bank Resolution Powers*". Except to the extent regulatory requirements affect the Bank's decision to issue more senior debt, there is no limit on the Bank's ability to incur additional senior debt.

Neither the Notes nor the Guarantee are insured by the FDIC, the CDIC or any other governmental insurance program.

Neither the Notes nor the Guarantee are deposit liabilities of the Bank or the Guarantor, respectively, and neither the Notes nor the Guarantee or your investment in the Notes are insured by the United States Federal Deposit Insurance Corporation ("**FDIC**"), the CDIC or any U.S. or Canadian governmental or deposit insurance agency.

Investors Are Subject to Our Credit Risk, and Our Credit Ratings and Credit Spreads May Adversely Affect the Market Value of the Notes.

Investors are dependent on the Bank's ability to pay all amounts due on the Notes on the interest payment dates and at maturity, and, therefore, investors are subject to the credit risk of the Bank and to changes in the market's view of the Bank's creditworthiness. Any decrease in the Bank's credit ratings or increase in the credit spreads charged by the market for taking the Bank's credit risk is likely to adversely affect the market value of the Notes.

The Trustee and the Indenture

The Trustee's powers may affect the interests of the holders of the Notes.

In the exercise of its powers, trusts, authorities and discretions, the Trustee will only have regard to the interests of the holders of the Notes. In the exercise of its powers, trusts, authorities and discretions, the Trustee may not act on behalf of the Bank or the Guarantor.

If, in connection with the exercise of its powers, trusts, authorities or discretions, the Trustee is of the opinion that the interests of the holders of the Notes would be unduly prejudiced thereby, the Trustee will not exercise such power, trust, authority or discretion without the approval by the holders of at least a majority of the principal amount of the Notes then outstanding.

If the Bank determines that the performance of its obligations under the Notes has or will become illegal in whole or in part for any reason, the Bank may redeem or cancel the Notes, as applicable, subject to the discussion below under "Description of the Notes—Redemption and Repurchase—Approval of Redemption, Repurchases and Defeasance; Amendments and Modifications" with respect to Bail-inable Notes.

If, in the case of illegality and to the extent permitted by applicable law, the Bank redeems or cancels the Notes, then the Bank will redeem each Note at the principal amount together (if applicable) with interest accrued to (but excluding) the date of redemption, which may be less than the Issue Price of the Notes and may in certain circumstances be zero.

The Trustee may agree to modifications to the Indenture without the holders of the Notes' prior consent.

The Indenture contains provisions for calling meetings of the holders of the Notes to consider matters affecting their interests generally. These provisions permit defined majorities to bind all holders of the Notes, including holders of Notes who do not attend and vote at the relevant meeting and holders of the Notes who voted in a manner contrary to the majority.

Pursuant to the terms of the Indenture, the Trustee may also, without the consent or sanction of any of the holders of the Notes, enter into one or more supplemental indentures to, among other things:

- cure ambiguities or corrections to defective or inconsistent provisions in the Indenture; or
- make any other amendments to the Indenture or the Notes that the Bank deems necessary or desirable, as long as such amendments do not adversely affect the rights or interests of the holders of the Notes.

Risks Applicable to Certain Series of Notes

The Notes may be subject to optional redemption by the Bank.

If specified in the applicable Supplement, the Notes will be subject to optional redemption by the Bank in accordance with the terms specified in "*Description of the Notes — Redemption and Repurchase*." Such optional redemption feature is likely to limit the market value of such Notes, which generally will not rise substantially above the price at which they can be redeemed.

The Bank may be expected to redeem the Notes when its cost of borrowing is lower than the interest rate on the Notes. At those times, you generally would not be able to reinvest the redemption proceeds at an effective interest rate as high as the interest rate on the Notes being redeemed and may only be able to do so at a significantly lower rate. You should consider reinvestment risk in light of other investments available at that time.

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, such redemption would be subject to the prior approval of the Superintendent of Financial Institutions as discussed below under "*Description of the Notes—Redemption and Repurchase—Approval of Redemption, Repurchases and Defeasance; Amendments and Modifications*" with respect to Bail-inable Notes.

Your investment may result in a loss; there may not be guaranteed return of principal.

Some issuances of the Notes may not be "principal protected," so the amount received at maturity may be greater than, equal to, or less than the Issue Price. It also is possible that principal will not be repaid. In addition, at maturity or upon earlier redemption or exchange, in the case of some of the Notes, the Noteholder may receive securities of one or more companies, instead of a cash payment. These securities may have an aggregate value at that time that is less than the principal amount of the Notes.

The Notes may be issued at a substantial discount or premium.

The market values of the Notes issued at a substantial discount or premium from their stated notional or principal amount tend to fluctuate more in relation to general changes in interest rates than do prices for conventional interest-bearing securities. Generally the longer the remaining term of the Notes, the greater the price volatility as compared to conventional interest-bearing securities with comparable maturities.

Fixed Rate Notes are subject to interest rate risk.

The value of any Fixed Rate Notes issued under the Program may fall as a result of changes in the current interest rate in the capital markets (the "**Market Interest Rate**"). The interest rate of the Fixed Rate Notes is fixed at the date of issuance, but the Market Interest Rate typically changes on a daily basis. As the Market Interest Rate changes, the price of a security such as the Fixed Rate Notes generally changes in the opposite direction. If the Market Interest Rate rises, the value of the Fixed Rate Notes will typically decrease which could lead to losses if you sell the Fixed Rate Notes at such a time.

For Notes with floating interest rate, the interest payable on the Notes during floating rate period will be uncertain.

The interest rate of certain Notes during certain interest periods may be based on a reference rate. The interest rate applicable for those interest periods will be uncertain and could be as little as 0.00%.

Changes in exchange rates and exchange controls could result in a substantial loss to you.

An investment in Notes denominated in a currency other than your principal currency of business presents certain risks relating to currency conversions. These include the risk that exchange rates may significantly change (as a result of the devaluation or revaluation of certain currencies or otherwise), and the risk that authorities with jurisdiction over a relevant currency may impose or modify exchange controls. This risk is described in more detail below under "*—Foreign Currency Risks*."

There are risks associated with Notes with payments in a Specified Currency other than U.S. dollars.

The terms of any Notes denominated in a Specified Currency other than U.S. dollars may provide that the Bank has the right to make a payment in U.S. dollars instead of the Specified Currency, if at or about the time when the payment on the Notes comes due, the Specified Currency is subject to convertibility, transferability or other conditions affecting its availability because of circumstances beyond the Bank's control. These circumstances could include the imposition of exchange controls for the Specified Currency. The exchange rate used to make payments in U.S. dollars may be based on limited information and would involve significant discretion on the part of the Calculation Agent that will determine the amount of U.S. dollars to be paid, and which may be the Bank or an affiliate of the Bank. As a result, the value of the payment in U.S. dollars may be less than the value of the payment that would have been received in the Specified Currency if the Specified Currency had been available. The Calculation Agent generally will not have any liability for its determinations, although the Bank or one of its affiliates may serve as the Calculation Agent.

Court judgments for Notes with a Specified Currency other than U.S. dollars.

The Notes will be governed by New York law. Under Section 27 of the New York Judiciary Law, a state court in the State of New York rendering a judgment on Notes denominated in a Specified Currency other than U.S. dollars would be required to render the judgment in the Specified Currency. In turn, the judgment would be converted into U.S. dollars at the exchange rate prevailing on the date of entry of judgment. Consequently, in a lawsuit for payment on the Notes, a Noteholder would bear currency exchange risk until judgment is entered, which could be a long time.

In courts outside of New York, Noteholders 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 Notes denominated in a Specified Currency other than U.S. dollars 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 Specified Currency into U.S. dollars will depend on various factors, including which court renders the judgment.

Changes or uncertainty in respect of LIBOR may affect the value of and return on Floating Rate Notes that reference LIBOR or the CMS Rate, including where LIBOR may not be available.

Various interest rates and other indices that are deemed to be "benchmarks," including the London Inter-Bank Offered Rate ("**LIBOR**") or the Constant Maturity Swap Rate ("**CMS**"), are the subject of recent national, international and other regulatory guidance and proposals for reform. Some of these reforms are already effective,

including the EU Benchmark Regulation (Regulation (EU) 2016/1011) (the "**Benchmarks Regulation**"), which compliance date was January 1, 2018, whilst others are still to be implemented.

These reforms and other pressures may cause LIBOR to disappear entirely, to perform differently than in the past (as a result of a change in methodology or otherwise), create disincentives for market participants to continue to administer or contribute to LIBOR or have other consequences that cannot be predicted. On July 27, 2017, the Chief Executive of the UK Financial Conduct Authority (the "**FCA**"), which regulates LIBOR, announced that the FCA will no longer persuade or compel banks to submit rates for the calculation of LIBOR after 2021.

It is not possible to predict the further effect of any changes in the methods by which LIBOR rates are determined, nor is it possible to predict the effect of any other reforms or proposals affecting LIBOR that may be enacted in the future, and may adversely affect the trading market for securities that bear interest at rates based on LIBOR, including Floating Rate Notes that bear interest at rates based on LIBOR. In addition, any future changes in the method pursuant to which LIBOR is determined or the transition to a successor benchmark may result in, among other things: (i) a sudden or prolonged increase or decrease in LIBOR or any successor benchmark rates; (ii) a delay in the publication of LIBOR or any such benchmark rates, (iii) a change in the rules or methodologies in LIBOR or any successor benchmarks that discourage market participants from continuing to administer or participate in LIBOR or any successor benchmarks; and (iv) LIBOR or any successor benchmark rate no longer being determined and published. Accordingly, in respect of a Note referencing LIBOR or any other relevant benchmark, such proposals for reform and changes in applicable regulation could have a material adverse effect on the value of and return on such a Note (including potential rates of interest thereon).

Because LIBOR is an element of the CMS rate, the potential cessation of LIBOR will have an effect on the calculation of the CMS rate.

Based on the foregoing, investors in Floating Rate Notes referencing LIBOR should be aware that:

(a) any of the reforms or pressures described above or any other changes to LIBOR could affect the level of the published rate, including to cause it to be lower and/or more volatile than it would otherwise be; and

(b) if LIBOR is permanently or indefinitely discontinued prior to the maturity of such Notes or if the Bank or its designee determines that a Benchmark Transition Event and its related Benchmark Transition Date have occurred with respect to U.S. dollar LIBOR, then the rate of interest on such Notes will be determined, unless otherwise specified in the applicable Pricing Supplement, by the benchmark replacement provisions provided for herein under the caption "*Description of the Notes—Interest—Floating Rate Notes—Screen Rate Determination—Benchmark Transition Event for U.S. dollar LIBOR Notes.*" The selection of a Benchmark Replacement to replace U.S. dollar LIBOR, and any decisions, determinations or elections made by the Bank or its designee in connection with implementing a Benchmark Replacement with respect to such Notes in accordance with the benchmark replacement provisions, could result in adverse consequences to the interest rate on such Notes, which could adversely affect the return on, value of and market for such Notes. Further, there is no assurance that the characteristics of any Benchmark Replacement will be similar to U.S. dollar LIBOR, or that any Benchmark Replacement will produce the economic equivalent of U.S. dollar LIBOR. Any decisions, determinations or elections made by the Bank or its designee in accordance with the benchmark replacement provisions will be binding on the noteholders.

More generally, any significant change to the setting or existence of LIBOR could have a material adverse effect on the value or liquidity of, and the amount payable under, Floating Rate Notes that reference LIBOR. No assurance may be provided that relevant changes will not be made to LIBOR and/or that LIBOR will continue to exist. Investors should consider these matters when making their investment decision with respect to such Notes.

The application of the benchmark replacement provisions may adversely affect Floating Rate Notes that reference U.S. dollar LIBOR.

The Benchmark Replacements specified in the benchmark replacement provisions include Term SOFR, a forward-looking term rate which will be based on the Secured Overnight Financing Rate. Term SOFR does not currently exist and is currently being developed under the sponsorship of the Federal Reserve Bank of New York (the "**FRBNY**"), and there is no assurance that the development of Term SOFR or any other forward-looking term rate based on SOFR will be completed. Uncertainty surrounding the development of forward-looking term rates based on SOFR could have a material adverse effect on the return on, value of and market for, the Notes. If a Benchmark

Transition Event and its related Benchmark Replacement Date occur with respect to U.S. dollar LIBOR and, at that time, a form of Term SOFR has not been selected or recommended by the Relevant Governmental Body, then the next-available Benchmark Replacement under the benchmark replacement provisions will be used to determine the amount of interest payable on such Notes for the next interest period and all subsequent interest periods (unless a Benchmark Transition Event and its related Benchmark Replacement Date occur with respect to that next-available Benchmark Replacement).

Under the benchmark replacement provisions, if a particular Benchmark Replacement or Benchmark Replacement Adjustment cannot be determined, then the next-available Benchmark Replacement or Benchmark Replacement Adjustment will apply. These replacement rates and adjustments may be selected or formulated by (i) the Relevant Governmental Body (such as the FRBNY's Alternative Reference Rates Committee (the "**ARRC**")), (ii) ISDA or (iii) in certain circumstances, the Bank. In addition, the benchmark replacement provisions expressly authorize the Bank to make Benchmark Replacement Conforming Changes with respect to, among other things, the determination and interpretation of interest periods and interest reset periods and the timing and frequency of determining rates and making payments of interest. The application of a Benchmark Replacement and Benchmark Replacement Adjustment, and any implementation of Benchmark Replacement Conforming Changes, could result in adverse consequences to the amount of interest payable on such Notes, which could adversely affect the return on, value of and market for such Notes. Further, there is no assurance that the characteristics of any Benchmark Replacement will be similar to the then-current Benchmark that it is replacing, or that any Benchmark Replacement will produce the economic equivalent of the then-current Benchmark that it is replacing.

An investment in any notes linked to SOFR (such notes, the "SOFR Rate Notes"), may entail significant risks not associated with similar investments in conventional debt securities.

Any investor should ensure that it understands the nature of the terms of SOFR Rate Notes and the extent of its exposure to risk, and that it considers the suitability of SOFR Rate Notes as an investment in the light of its own circumstances and financial condition. Investors should consult their own professional advisers about the risks associated with investment in SOFR Rate Notes and the suitability of investing in these SOFR Rate Notes in light of their particular circumstances.

The daily secured overnight financing rate is published by the Federal Reserve Bank of New York and is intended to be a broad measure of the cost of borrowing cash overnight collateralized by Treasury securities. The Federal Reserve Bank of New York reports that the daily secured overnight financing rate includes all trades in its reported Broad General Collateral Rate, plus bilateral Treasury repurchase agreement transactions cleared through the delivery-versus-payment service offered by the Fixed Income Clearing Corporation (the "**FICC**"), a subsidiary of The Depository Trust and Clearing Corporation ("**DTCC**"). The daily secured overnight financing rate is filtered by the Federal Reserve Bank of New York to remove a portion of the foregoing transactions considered to be "specials".

The Federal Reserve Bank of New York reports that the daily secured overnight financing rate is calculated as a volume-weighted median of transaction-level tri-party repo data collected from The Bank of New York Mellon as well as general collateral finance repurchase agreement transaction data and data on bilateral Treasury repurchase transactions cleared through the FICC's delivery-versus-payment service. The Federal Reserve Bank of New York notes that it obtains information from DTCC Solutions LLC, an affiliate of DTCC. The Federal Reserve Bank of New York notes on its publication page for the daily secured overnight financing rate that use of the daily secured overnight financing rate is subject to important limitations and disclaimers, including that the Federal Reserve Bank of New York may alter the methods of calculation, publication schedule, rate revision practices or availability of the daily secured overnight financing rate at any time without notice.

As the daily secured overnight financing rate is published by the Federal Reserve Bank of New York based on data received from other sources, the Bank has no control over its determination, calculation or publication. There can be no guarantee that the daily secured overnight financing rate will not be discontinued or fundamentally altered in a manner that is materially adverse to the interests of investors in SOFR Rate Notes. If the manner in which the daily secured overnight financing rate is calculated is changed, that change may result in a reduction of the amount of interest payable on SOFR Rate Notes and the trading prices of SOFR Rate Notes.

The Federal Reserve Bank of New York began to publish the daily secured overnight financing rate in April 2018. The Federal Reserve Bank of New York has also begun publishing historical indicative daily secured overnight

financing rates going back to 2014. Investors should not rely on any historical changes or trends in the daily secured overnight financing rate as an indicator of future changes in the daily secured overnight financing rate. Also, as the daily secured overnight financing rate is a relatively new market index, SOFR Rate Notes will likely have no established trading market when issued, and an established trading market may never develop or may not be very liquid. Market terms for debt securities indexed to the daily secured overnight financing rate, such as the spread over the index reflected in interest rate provisions, may evolve over time, and trading prices of SOFR Rate Notes may be lower than those of later-issued indexed debt securities as a result. Similarly, if the daily secured overnight financing rate does not prove to be widely used in securities like SOFR Rate Notes, the trading price of SOFR Rate Notes may be lower than those of notes linked to indices that are more widely used. Investors in SOFR Rate Notes may not be able to sell SOFR Rate Notes at all or may not be able to sell the SOFR Rate Notes at prices that will provide them with a yield comparable to similar investments that have a developed secondary market, and may consequently suffer from increased pricing volatility and market risk.

The daily secured overnight financing rate is a new market index and the related derivative, futures and options markets are just developing. There can be no assurance that such markets will develop or will be liquid. Market rates for hedging interest rate risk related to the daily secured overnight financing rate may be higher than the market rates related to more established indices. Investors may not be able to hedge any interest rate risk related to SOFR Rate Notes and consequently may be exposed to increased pricing volatility for such notes.

Moreover, under the benchmark replacement provisions set forth under "*Description of the Notes—Interest—Floating Rate Notes— Screen Rate Determination—Benchmark Transition Event for U.S. dollar LIBOR Notes,*" if a Benchmark Transition Event and related Benchmark Replacement Date occur with respect to U.S. dollar LIBOR and the Bank or its designee (after consulting with the Bank) cannot determine the Interpolated Benchmark with respect to U.S. dollar LIBOR, then the rate of interest on Floating Rate U.S. dollar LIBOR Notes will be determined based on SOFR unless a Benchmark Transition Event and related Benchmark Replacement Date also occur with respect to the Benchmark Replacements based on SOFR, in which case the rate of interest on such Notes will be based on the next-available Benchmark Replacement. In the following discussion of risks relating to SOFR, references to Notes mean the Notes at any time when the rate of interest on such Notes is or will be determined based on SOFR.

The composition and characteristics of SOFR are not the same as those of U.S. dollar LIBOR, and SOFR is not expected to be a comparable replacement for U.S. dollar LIBOR.

In June 2017, the ARRC announced SOFR as its recommended alternative to U.S. dollar LIBOR. However, the composition and characteristics of SOFR are not the same as those of U.S. dollar LIBOR. SOFR is a broad Treasury repurchase financing rate that represents overnight secured funding transactions and is not the economic equivalent of U.S. dollar LIBOR. While SOFR is a secured rate, U.S. dollar LIBOR is an unsecured rate. And, while SOFR is currently only an overnight rate, U.S. dollar LIBOR is a forward-looking rate that represents interbank funding for a specified term.

As a result, there can be no assurance that SOFR will perform in the same way as U.S. dollar LIBOR would have at any time, including, without limitation, as a result of changes in interest and yield rates in the market, bank credit risk, market volatility or global or regional economic, financial, political, regulatory, judicial or other events. For the same reasons, SOFR is not expected to be a comparable replacement for U.S. dollar LIBOR.

SOFR has a very limited history, and the future performance of SOFR cannot be predicted based on historical performance.

The publication of SOFR began in April 2018, and, therefore, it has a very limited history. In addition, the future performance of SOFR cannot be predicted based on the limited historical performance. Levels of SOFR following the occurrence of a Benchmark Transition Event and related Benchmark Replacement Date may bear little or no relation to the historical actual or historical indicative data. Prior observed patterns, if any, in the behavior of market variables and their relation to SOFR, such as correlations, may change in the future. While some pre-publication historical data have been released by the FRBNY, such analysis inherently involves assumptions, estimates and approximations. The future performance of SOFR is impossible to predict and therefore no future performance of SOFR may be inferred from any of the historical actual or historical indicative data. Hypothetical or historical performance data are not indicative of, and have no bearing on, the potential performance of SOFR.

SOFR may be more volatile than other benchmark or market rates.

Since the initial publication of SOFR, daily changes in the rate have, on occasion, been more volatile than daily changes in other benchmark or market rates, such as three-month U.S. dollar LIBOR, during corresponding periods, and SOFR may bear little or no relation to the historical actual or historical indicative data. In addition, although changes in Term SOFR, Average SOFR and Compounded SOFR generally are not expected to be as volatile as changes in daily levels of SOFR, the return on and value of the Notes may fluctuate more than floating rate securities that are linked to less volatile rates.

Any failure of SOFR to gain market acceptance could adversely affect the Notes.

According to the ARRC, SOFR was developed for use in certain U.S. dollar derivatives and other financial contracts as an alternative to U.S. dollar LIBOR in part because it is considered a good representation of general funding conditions in the overnight U.S. Treasury repurchase agreement market. However, as a rate based on transactions secured by U.S. Treasury securities, it does not measure bank-specific credit risk and, as a result, is less likely to correlate with the unsecured short-term funding costs of banks. This may mean that market participants would not consider SOFR a suitable replacement or successor for all of the purposes for which U.S. dollar LIBOR historically has been used (including, without limitation, as a representation of the unsecured short-term funding costs of banks), which may, in turn, lessen market acceptance of SOFR. Any failure of SOFR to gain market acceptance could adversely affect the return on and value of the Notes and the price at which investors can sell the Notes in the secondary market.

The secondary trading market for securities linked to SOFR may be limited.

If SOFR does not prove to be widely used as a benchmark in securities that are similar or comparable to the Notes, the trading price of the SOFR Rate Notes may be lower than those of securities that are linked to rates that are more widely used. Similarly, market terms for securities that are linked to SOFR, including, but not limited to, the spread over the reference rate reflected in the interest rate provisions, may evolve over time, and as a result, trading prices of the SOFR Rate Notes may be lower than those of later-issued securities that are based on SOFR. Investors in the SOFR Rate Notes may not be able to sell the SOFR Rate Notes at all or may not be able to sell the SOFR Rate Notes at prices that will provide them with a yield comparable to similar investments that have a developed secondary market, and may consequently suffer from increased pricing volatility and market risk.

SOFR and the SOFR Index may be modified or discontinued, and the SOFR Rate Notes may bear interest by reference to a rate other than Compounded SOFR, Average SOFR or Term SOFR, which could adversely affect the value of the SOFR Rate Notes.

SOFR is a relatively new rate, and the FRBNY (or a successor), as administrator of SOFR, may make methodological or other changes that could change the value of SOFR, including changes related to the method by which SOFR is calculated, eligibility criteria applicable to the transactions used to calculate SOFR, or timing related to the publication of SOFR. If the manner in which SOFR is calculated is changed, that change may result in a reduction of the amount of interest payable on the Notes, which may adversely affect the trading prices of the Notes. The administrator of SOFR may withdraw, modify, amend, suspend or discontinue the calculation or dissemination of SOFR in its sole discretion and without notice and has no obligation to consider the interests of holders of the Notes in calculating, withdrawing, modifying, amending, suspending or discontinuing SOFR.

The SOFR Index is published by the FRBNY and measures the cumulative impact of compounding SOFR on a unit of investment over time, with the initial value set to 1.00000000 on April 2, 2018, the first value date of SOFR. The SOFR Index value reflects the effect of compounding SOFR each business day and allows the calculation of compounded SOFR averages over custom time periods. The FRBNY notes on its publication page for the SOFR Index that use of the SOFR Index is subject to important limitations, indemnification obligations and disclaimers, including that the FRBNY may alter the methods of calculation, publication schedule, rate revision practices or availability of the SOFR Index at any time without notice. Moreover, the SOFR Index is published by the FRBNY based on data received by it from sources other than the Bank, and the Bank has no control over its methods of calculation, publication schedule, rate revision practices or availability of the SOFR Index at any time. There can be no guarantee, particularly given its relatively recent introduction, that the SOFR Index will not be discontinued or fundamentally altered in a manner that is materially adverse to the interests of investors in the SOFR Rate Notes. If the manner in which the SOFR Index is calculated, including the manner in which SOFR is calculated, is changed,

that change may result in a reduction in the amount of interest payable on the SOFR Rate Notes and the trading prices of such Notes. In addition, the FRBNY may withdraw, modify or amend the published SOFR Index or SOFR data in its sole discretion and without notice. The interest rate for any interest period will not be adjusted for any modifications or amendments to the SOFR Index or SOFR data that the FRBNY may publish after the interest rate for that interest period has been determined.

If the Bank or its designee (which may be the Calculation Agent) determines that a Benchmark Transition Event and its related Benchmark Replacement Date have occurred in respect of SOFR or the SOFR Index, then the interest rate on the SOFR Rate Notes will no longer be determined by reference to SOFR or the SOFR Index, but instead will be determined by reference to a different rate, which will be a different benchmark than SOFR or the SOFR Index, plus a spread adjustment, which we refer to as a "Benchmark Replacement," as further described under "*Description of the Notes—Interest—Floating Rate Notes—SOFR Rate Notes—Effect of a Benchmark Transition Event."*

If a particular Benchmark Replacement or Benchmark Replacement Adjustment cannot be determined, then the next-available Benchmark Replacement or Benchmark Replacement Adjustment will apply. These replacement rates and adjustments may be selected, recommended or formulated by (i) the Relevant Governmental Body (such as the ARRC), (ii) ISDA or (iii) in certain circumstances, the Bank, the Calculation Agent or another designee of the Bank. In addition, the terms of the SOFR Rate Notes expressly authorize the Bank, the calculation Agent or another designee of the Bank to make Benchmark Replacement Conforming Changes with respect to, among other things, changes to the definition of "Interest Period," timing and frequency of determining rates and making payments of interest and other administrative matters. The determination of a Benchmark Replacement, the calculation of the interest rate on the SOFR Rate Notes by reference to a Benchmark Replacement (including the application of a Benchmark Replacement Adjustment), any implementation of Benchmark Replacement Conforming Changes and any other determinations, decisions or elections that may be made under the terms of the SOFR Rate Notes in connection with a Benchmark Transition Event could adversely affect the value of the SOFR Rate Notes, the return on the SOFR Rate Notes and the price at which an investor can sell such SOFR Rate Notes.

Any determination, decision or election described above will be made in the sole discretion of the Bank, the Calculation Agent or another designee of the Bank.

In addition, (i) the composition and characteristics of the Benchmark Replacement will not be the same as those of SOFR, the Benchmark Replacement will not be the economic equivalent of SOFR, there can be no assurance that the Benchmark Replacement will perform in the same way as SOFR would have at any time and there is no guarantee that the Benchmark Replacement will be a comparable substitute for SOFR (each of which means that a Benchmark Transition Event could adversely affect the value of the SOFR Rate Notes, the return on the SOFR Rate Notes and the price at which an investor can sell the SOFR Rate Notes), (ii) any failure of the Benchmark Replacement to gain market acceptance could adversely affect the SOFR Rate Notes, (iii) the Benchmark Replacement may have a very limited history and the future performance of the Benchmark Replacement cannot be predicted based on historical performance and (iv) the administrator of the Benchmark Replacement may make changes that could change the value of the Benchmark Replacement or discontinue the Benchmark Replacement and has no obligation to consider an investor's interests in doing so.

The interest rate on the SOFR Rate Notes will be based on Compounded SOFR, SOFR Index, Average SOFR or Term SOFR, each of which is relatively new in the marketplace.

For each Interest Period, the interest rate on the SOFR Rate Notes will be based on Compounded SOFR, SOFR Index, Average SOFR or Term SOFR, each of which is calculated using the specific formula described in "*Description of the Notes—Interest—Floating Rate Notes—SOFR Rate Notes"* below, not the SOFR rate published on or in respect of a particular date during such Interest Period or an arithmetic average of SOFR rates during such period. For this and other reasons, the Base Rate on the SOFR Rate Notes during any Interest Period will not be the same as the Base Rate on other SOFR-linked investments that use an alternative basis to determine the applicable interest rate. Further, if the SOFR rate in respect of a particular date during an Interest Period is negative, its contribution to Compounded SOFR or Average SOFR will be less than one, resulting in a reduction to Compounded SOFR or Average SOFR used to calculate the interest payable on the SOFR Rate Notes on the Interest Payment Date for such Interest Period.

In addition, very limited market precedent exists for Notes that use SOFR as the Base Rate and the method for calculating an interest rate based upon SOFR in those precedents varies. In addition, the Federal Reserve Bank of New York only began publishing the SOFR Index on March 2, 2020. Accordingly, the specific formula for the Compounded SOFR rate used in the SOFR Rate Notes may not be widely adopted by other market participants, if at all. If the market adopts a different calculation method, that would likely adversely affect the market value of the SOFR Rate Notes.

The Bank or its designee (which may be the Calculation Agent) will make determinations with respect to the SOFR Rate Notes.

The Bank or its designee (which may be the Calculation Agent) will make certain determinations with respect to the SOFR Rate Notes. In addition, if a Benchmark Transition Event and its related Benchmark Replacement Date have occurred, the Bank or its designee (which may be the Calculation Agent) will make certain determinations with respect to the SOFR Rate Notes in the sole discretion of the Bank, its designee or the Calculation Agent. Any of these determinations may adversely affect the payout to an investor on the SOFR Rate Notes. Moreover, certain determinations may require the exercise of discretion and the making of subjective judgments. These potentially subjective determinations may adversely affect the payout to an investor on the SOFR Rate Notes.

Because LIBOR is an element of the CMS rate, the calculation of the CMS Rate will change after the cessation of LIBOR.

The hypothetical fixed-for-floating U.S. dollar interest rate swap transaction upon which the CMS Rate is based relies on a calculation of U.S. dollar LIBOR. At this time, it is not known how the U.S. dollar LIBOR floating rate leg of the CMS Rate will be calculated after LIBOR ceases to be published. Although it is likely that the fallback provisions for U.S. dollar LIBOR floating rate notes, as described below under "Description of the Notes — Interest — Floating Rate Notes — Benchmark Transition Event for U.S. dollar LIBOR Notes," will apply in the calculation of the floating rate leg of the CMS Rate instead of the current U.S. dollar LIBOR calculation, there is no certainty in the market at this time. Consequently, after the cessation of LIBOR, the CMS Rate may change in ways that may be adverse to holders of Floating Rate Notes linked to the CMS Rate.

Historical levels of the reference rate(s) should not be taken as an indication of its future performance

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

The inclusion in the Issue 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 is expected to include 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 the Issue Price.

The Notes may not be a suitable investment for all investors.

You must determine the suitability of an investment in the Notes in light of your own circumstances. In particular, you should:

(a) have sufficient knowledge and experience to make a meaningful evaluation of the Notes, the merits and risks of investing in the Notes and the information contained or incorporated by reference in this Offering Circular or the applicable Supplement;

(b) have access to, and knowledge of, appropriate analytical tools to evaluate, in the context of your particular financial situation, an investment in the Notes and the impact the Notes will have on its overall investment portfolio;

(c) have sufficient financial resources and liquidity to bear all of the risks of an investment in the Notes, including where the currency for principal or interest payments is different from your currency;

(d) understand thoroughly the terms of the Notes and be familiar with the behavior of the relevant financial markets; and

(e) be able to evaluate (either alone or with the help of a financial adviser) at the time of initial investment and on an ongoing basis possible economic, interest rate and other factors that may affect your investment and your ability to bear the applicable risks.

The Bank's hedging activities may affect the market value of and the return on the Notes.

At any time, the Bank or its affiliates, including the Agents that are affiliates of the Bank, may engage in hedging activities relating to the Notes. This hedging activity, in turn, may decrease the market value of the Notes prior to maturity, and may affect the amounts due on the Notes. In addition, the Bank or one or more of its affiliates, including the Agents that are affiliates of the Bank, may purchase or otherwise acquire a long or short position in the Notes from time to time, and may hold or resell the Notes. For example, the Agents may enter into these transactions in connection with any market making transactions in which they engage. There is no assurance that these activities will not adversely affect the market value of the Notes prior to maturity or the amounts due on the Notes.

The business activities of the Bank or its affiliates may create conflicts of interest.

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.

Foreign Currency Risks

You should consult your financial and legal advisers as to any specific risks entailed by an investment in securities that are denominated or payable in, or the payment of which is linked to the value of, a currency other than the currency of the country in which you are resident or in which you conduct your business, which we refer to as your "home currency." These securities are not appropriate investments for investors who are not sophisticated in foreign currency transactions. We disclaim any responsibility to advise prospective purchasers who are residents of countries other than the United States of any matters arising under non-U.S. law that may affect the purchase of or holding of, or the receipt of payments on, these securities. These persons should consult their own legal and financial advisers concerning these matters.

General exchange rate and exchange control risks.

An investment in a security that is denominated or payable in, or the payment of which is linked to the value of, currencies other than your home currency entails significant risks. These risks include the possibility of significant changes in rates of exchange between your home currency and the relevant foreign currencies and the possibility of the imposition or modification of exchange controls by the relevant governmental entities. These risks generally depend on economic and political events over which we have no control.

Exchange rates will affect your investment.

In recent years, rates of exchange between some currencies have been highly volatile and this volatility may continue in the future. Fluctuations in any particular exchange rate that have occurred in the past are not necessarily indicative, however, of fluctuations that may occur during the term of any security. Depreciation against your home currency of the currency in which a security is payable would result in a decrease in the effective yield of the security below its coupon rate or in the payout of the security and could result in an overall loss to you on a home currency basis. In addition, depending on the specific terms of a currency-linked security, changes in exchange rates relating to

any of the relevant currencies could result in a decrease in its effective yield and in your loss of all or a substantial portion of the value of that security.

We have no control over exchange rates.

Currency exchange rates can either float or be fixed by sovereign governments. Exchange rates of most economically developed nations are permitted to fluctuate in value relative to each other. However, from time to time governments may use a variety of techniques, such as intervention by a country's central bank, the imposition of regulatory controls or taxes or changes in interest rates to influence the exchange rates of their currencies. Governments may also issue a new currency to replace an existing currency or alter the exchange rate or relative exchange characteristics by a devaluation or revaluation of a currency. These governmental actions could change or interfere with currency valuations and currency fluctuations that would otherwise occur in response to economic forces, as well as in response to the movement of currencies across borders.

As a consequence, these government actions could adversely affect yields or payouts in your home currency for (i) securities denominated or payable in currencies other than your home currency or (ii) currency-linked securities.

We will not make any adjustment or change in the terms of the securities in the event that exchange rates should become fixed, or in the event of any devaluation or revaluation or imposition of exchange or other regulatory controls or taxes, or in the event of other developments affecting your home currency or any applicable foreign currency. You will bear those risks.

Some foreign currencies may become unavailable.

Governments have imposed from time to time, and may in the future impose, exchange controls that could also affect the availability of a specified currency. Even if there are no actual exchange controls, it is possible that the applicable currency for any security would not be available when payments on that security are due.

Exchange rates may affect the value of a New York judgment involving non-U.S. dollar securities.

The Notes will be governed by and construed in accordance with the laws of the State of New York. If a New York court were to enter a judgment in an action on any securities denominated in a foreign currency, such court would enter a judgment in the foreign currency and convert the judgment or decree into U.S. dollars at the prevailing rate of exchange on the date such judgment or decree is entered.

Risks Related to the Market Generally

Set out below is a brief description of the principal market risks, including liquidity risk and credit risk.

Many economic and other factors may adversely affect the market value of the Notes.

The market for, and the market value of, the Notes may be affected by a number of factors that may either offset or magnify each other, including:

- the time remaining to maturity of the Notes;
- the aggregate amount outstanding of the Notes;
- the level, direction, and volatility of market interest rates generally;
- general economic conditions of the capital markets in the United States;
- geopolitical conditions and other financial, political, regulatory, and judicial events that affect the capital markets generally;
- our financial condition and creditworthiness; and
- any market-making activities with respect to the Notes.

Absence of secondary market; lack of liquidity.

There is not, at present, an active and liquid secondary market for the Notes, and there can be no assurance that a secondary market for the Notes will develop. If a market does develop, it may not be very liquid. The Notes have not been, and will not be, registered under the Securities Act or any other applicable securities laws and are subject to certain restrictions on the resale and other transfer thereof as set forth under "*Plan of Distribution and Conflicts of Interest*." If a secondary market does develop, it may not continue for the life of the Notes or it may not provide holders of the Notes with liquidity of investment with the result that a holder of the Notes may not be able to find a buyer to buy its Notes readily or at prices that will enable the holder of the Notes to realize a desired yield. Therefore, you may not be able to sell your Notes easily or at prices that will provide you with a yield comparable to similar investments that have a developed secondary market. This is particularly the case for Notes that are especially sensitive to interest rate, currency or market risks, are designed for specific investment objectives or strategies or have been structured to meet the investment requirements of limited categories of investors. These types of Notes generally would have a more limited secondary market and more price volatility than conventional debt securities. Illiquidity may have a severely adverse effect on the market value of Notes.

In addition, you should be aware of the prevailing and widely reported global credit market conditions (which continue at the date hereof), whereby there is a general lack of liquidity in the secondary market for instruments similar to (and including) the Notes. As a result, you may suffer losses on the Notes in secondary market transactions even if there is no decline in the performance of the Bank. We cannot predict how and when these circumstances will change and whether, if and when they do change, there will be a more liquid market for the Notes or instruments similar to the Notes at that time.

In addition, liquidity crises may stall the primary market for a number of financial products including the Notes. While liquidity crises have been alleviated for certain sectors of the global credit markets, there can be no assurance that the market for securities including the Notes will recover or will recover at the same time or to the same degree as such other recovering global credit market sectors.

Legal Investment Considerations May Restrict Certain Investments

The investment activities of certain investors are subject to legal investment laws and regulations, or review or regulation by certain authorities. You should consult your legal advisers to determine whether and to what extent (i) Notes are legal investments for you, (ii) Notes can be used as collateral for various types of borrowing and (iii) other restrictions apply to your purchase or pledge of any Notes. Financial institutions should consult their legal advisers or the appropriate regulators to determine the appropriate treatment of Notes under any applicable risk-based capital or similar rules.

Interests of Agents

Certain of the Agents and their affiliates have engaged, and may in the future engage, in investment banking and/or commercial banking transactions with, and may perform services for, the Bank in the ordinary course of business without regard to the Bank, the Guarantor, the Trustee or the holders of the Notes.

There are potential conflicts of interest between you and the Calculation Agent.

The Bank or one of its affiliates may serve as the Calculation Agent. The Calculation Agent will, among other things, decide the amount of your payment for any applicable payment date, and make any other required determinations. We may change the Calculation Agent after the original Issue Date without notice to you. The Calculation Agent will be required to carry out its duties in good faith and use its reasonable judgment. However, because 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, and 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.

Under the fallback provisions for Floating Rate Notes linked to LIBOR or CMS, we or the Calculation Agent may make calculations and adjustments to the Rate of Interest in connection with any successor or replacement rate for LIBOR or CMS. Any of these calculations and adjustments will be done in the sole discretion of us or the Calculation Agent, without taking into account the interests of the Note holders.

Additional Risk Factors

Please review the applicable Supplement for additional risk factors that may be applicable to the Notes that you purchase.

NATIONAL BANK OF CANADA

The information appearing below is supplemented by the more detailed information contained in the documents incorporated by reference in this Offering Circular. See "Documents Incorporated by Reference" above.

Introduction

The Bank's roots date back to 1859 with the founding of Banque Nationale in Québec City, Québec, Canada. The Bank is a chartered bank governed by the Bank Act and is named in Schedule I of the Bank Act. The head office of the Bank is located at, 600 De La Gauchetière Street West, Montréal, Québec, Canada H3B 4L2. The telephone number of the Bank is 1-514-394-6433.

Business

The Bank, together with its various subsidiaries, is an integrated provider of financial services to retail, commercial, corporate and institutional clients. It operates in four business segments, Personal and Commercial, Wealth Management, Financial Markets, and U.S. Specialty Finance and International and offers a complete range of services: banking and investment solutions, insurance, wealth management, corporate and investment banking, mutual fund and pension fund management, and securities brokerage.

NATIONAL BANK OF CANADA, NEW YORK BRANCH

Overview of the New York Branch and the Notes

National Bank of Canada, New York Branch ("**NBCNY**") carries on business pursuant to a license issued by the Superintendent and provides a full range of commercial banking services to corporate customers, institutional investors and financial institutions, being particularly active in the area of commercial lending. It funds itself by taking corporate and bank deposits, borrowing in the interbank market and issuing certificates of deposit. NBCNY maintains a trading portfolio of securities consisting primarily of investment grade debt securities, including mortgage-backed securities issued by U.S. — government-sponsored entities and floating- and fixed-rate notes issued by financial institutions and the U.S. Treasury.

NBCNY is licensed by the Superintendent and is regulated by the State of New York Banking Department on a basis substantially equivalent to New York State chartered banks. Therefore, the Notes (which are guaranteed by NBCNY) are exempt from the registration requirements of the Securities Act.

The obligations of the NBCNY in respect of the Notes are not insured or guaranteed by the FDIC or any other governmental agency or authority in the United States, Canada or elsewhere.

NBCNY employed a total of 14 persons as of June 9, 2020 and is located at The Park Avenue Tower, 65 East 55th Street, 8th Floor, New York, NY 10022. Its telephone number is (212) 632-8500.

Supervision and Regulation of the New York Branch in the United States

Banking Activities

The Bank is licensed by the Superintendent under the New York Banking Law (the "**NYBL**") to maintain a branch office in New York State. Under that license, NBCNY is authorized to engage in "the business of buying, selling, paying or collecting bills of exchange, or of issuing letters of credit or of receiving money for transmission or transmitting the same by draft, check, cable or otherwise, or of making loans, or of receiving deposits...".

NBCNY must maintain regular records of assets and liabilities of NBCNY. NBCNY must submit written reports as to its assets and liabilities and other matters, to the extent that the Superintendent requires the filing of these reports, and is examined by the New York State Department of Financial Services and the Board of Governors of the Federal Reserve System (the "**Federal Reserve Board**").

Under the NYBL and implementing regulations, NBCNY must maintain on deposit pledged to the Superintendent with a bank in the State of New York certain eligible assets (which may include U.S. treasuries, other obligations issued or guaranteed by the U.S. government or agencies or instrumentalities thereof, obligations of the New York State government and local governments within New York State, and numerous other assets meeting the criteria established in the NYBL and applicable regulations) equal to 1% of third-party liabilities. Under the NYBL, the Superintendent is also empowered to require branches of foreign banks to maintain in New York specified assets equal to such percentage of the branches' liabilities, excluding liabilities to other offices, agencies, branches and affiliates of the Bank, as the Superintendent may designate. At present, the Superintendent has set this percentage at 0%, although specific asset maintenance requirements may be imposed upon individual branches on a case-by-case basis. The Superintendent has not prescribed such a requirement for NBCNY.

The NYBL authorizes the Superintendent to take possession of the business and property in New York State of a foreign bank that is licensed by the Superintendent to maintain a New York branch under circumstances similar to those that would permit the Superintendent to take possession of the business and property of a New York State-chartered bank, including the violation of any law, conduct of business in an unauthorized or unsafe manner, capital impairments, or the suspension of payment of obligations. Additionally, the NYBL authorizes the Superintendent to take possession of such a foreign bank's business and property in New York State upon a finding that the foreign bank is in liquidation in the jurisdiction of its domicile or that there is reason to doubt a foreign bank's ability or willingness to pay in full the claims of its creditors.

Pursuant to the NYBL, when the Superintendent takes possession of a New York branch of a foreign bank, it succeeds to NBCNY's assets and all other assets of the foreign bank located in New York State. In liquidating or

dealing with NBCNY's business after taking possession of the branch, the Superintendent shall accept for payment out of the foreign bank's business and property in New York State only those claims that arose out of transactions with the branch, and shall not accept (1) claims that would not represent an enforceable legal obligation against the branch if such branch were a separate and independent legal entity, or (2) amounts due and other liabilities to other offices, agencies or branches of, and affiliates of, the foreign bank. After such claims are paid, the Superintendent would turn over the remaining assets, if any, to any other U.S. offices that may be maintained by the foreign bank and that are being liquidated, upon the request of the liquidators of those offices; after such payments, if any, have been made, any assets of the foreign bank remaining in the possession of the Superintendent would be turned over to the head office of the foreign bank or to the foreign bank's duly appointed domiciliary liquidator or receiver.

NBCNY's loans, purchases and discounts of notes, bills of exchange, bonds, debentures and other obligations and extensions of credit and acceptances are subject to the same limitations as are applicable to a New York State-chartered bank. For NBCNY, such limits, which are expressed as a percentage of capital, surplus and undivided profits, are based on the capital, surplus and undivided profits of the Bank on a global basis.

In addition to being subject to New York laws and regulations, NBCNY is also subject to federal regulation primarily under the International Banking Act of 1978, as amended (the "**IBA**"), and the amendments to the IBA made pursuant to the Foreign Bank Supervision Enhancement Act of 1991 (the "**FBSEA**"), and to examination by the Federal Reserve Board, in its capacity as the Bank's U.S. "umbrella supervisor." Under the IBA, as amended by the FBSEA, all U.S. branches and agencies of foreign banks, such as NBCNY, are subject to reporting and examination requirements similar to those imposed on domestic banks that are owned or controlled by U.S. bank holding companies, and most U.S. branches and agencies of foreign banks, including NBCNY, are subject to reserve requirements on deposits pursuant to regulations of the Federal Reserve Board. Because NBCNY engages in a wholesale banking business and does not accept retail deposits, its deposits are not, and are not required to be, insured by the Federal Deposit Insurance Corporation. The Bank is subject to the same conditions and limitations as are applicable to domestic U.S. state-chartered or national banks with regard to the establishment of new branches or the acquisition of subsidiary banks outside its "home state" which, in the case of the Bank, is New York.

Among other things, the FBSEA provides that a state-licensed branch of a foreign bank may not engage in any type of activity that is not permissible for a federally-licensed branch of a foreign bank unless the Federal Reserve Board has determined that such activity is consistent with sound banking practice. A state-licensed branch of a foreign bank must also comply with the single-borrower lending limits applicable to federally licensed branches or agencies, which derive from those applicable to national banks. These limits are based on the capital and surplus of the entire foreign bank. In addition, the FBSEA authorizes the Federal Reserve Board to terminate the activities of a U.S. branch or agency of a foreign bank if it finds that (i) the foreign bank is not subject to comprehensive supervision on a consolidated basis in its home country or (ii) there is reasonable cause to believe that such foreign bank has violated the law or engaged in unsafe banking practice in the United States, and as a result, continued operation of the branch or agency would be inconsistent with the public interest and purposes of the banking laws.

If the Federal Reserve Board were to use this authority to close NBCNY, creditors of NBCNY would have recourse only against the Bank, unless the Superintendent or other regulatory authorities were to make alternative arrangements for the payment of the liabilities of NBCNY.

NBCNY is also restricted under federal banking law, in the same general manner as domestic U.S. banks, from engaging in certain "tying" arrangements involving its products and services and/or those of its affiliates. The NYBL limits the amount of loans to, purchases of securities from, and total liabilities of any one person by NBCNY and restricts executive officers of NBCNY from serving as executive officers of other banking entities.

The Gramm-Leach-Bliley Act (the "**GLBA**") and the regulations issued thereunder contain a number of other provisions that affect the Bank's U.S. banking operations and the operations of all U.S. financial institutions generally. One such provision relates to the financial privacy of consumers. In addition, the so-called "push-out" provisions of the GLBA limit the exclusion of banks (including NBCNY) from the definitions of "broker" and "dealer" under the U.S. Securities Exchange Act of 1934, as amended (the "**Exchange Act**"). Pursuant to the "push-out" provisions, banks are required to conduct their securities dealing and brokerage activities through registered broker-dealers (unless an exemption applies). The SEC has adopted rules implementing certain exemptions from the "dealer" push-out requirement, and the SEC and the Federal Reserve Board have jointly adopted Regulation R, which sets forth the

conditions under which banks may engage in certain types of securities-related activities without being deemed to be a "broker" and thereby being required to register with the SEC.

Anti-Money Laundering

On October 26, 2001, in response to the events of September 11, the President of the United States signed into law the Uniting and Strengthening America by Providing Appropriate Tools Required to Intercept and Obstruct Terrorism Act of 2001 (the "**USA PATRIOT Act**"). Title III of the USA PATRIOT Act amended the Bank Secrecy Act (the "**BSA**") by significantly expanding the responsibility of financial institutions in preventing the use of the U.S. financial system for money laundering or terrorist financing. Among other provisions, Title III of the USA PATRIOT Act and the BSA require banks in the United States, including U.S. branches, agencies and representative offices of foreign banks, to adopt a risk-based, written anti-money laundering program that includes the following components: (i) a system of internal controls to ensure ongoing compliance with applicable laws and regulations; (ii) the designation of an individual or individuals responsible for coordinating and monitoring day-to-day compliance; (iii) independent testing of compliance by internal audit or by qualified outside parties; and (iv) a training program for appropriate personnel. The anti-money laundering program must be approved by the foreign bank's board of directors or by a delegate acting under the express authority of the board of directors. As part of its anti-money laundering program, NBCNY must also include policies and procedures for customer identification and verification, due diligence regarding foreign correspondent banking and private banking relationships, monitoring and reporting suspicious activity, and reporting certain transactions involving currency and monetary instruments.

NBCNY must also comply with the U.S. Treasury Department's Office of Foreign Assets Control ("**OFAC**") regulations. OFAC administers and enforces economic and trade sanctions against targeted foreign countries, individuals, entities and organizations in order to carry out U.S. foreign policy and national security objectives. Generally, the regulations require that assets of specified targets be blocked and prohibit certain types of trade and financial transactions with those targets unless a license has been issued by OFAC. Blocked assets and rejected transactions must be reported to OFAC.

Failure of the Bank (including NBCNY) to maintain and implement adequate programs to combat anti-money laundering and terrorist financing, and to comply with U.S. economic sanctions, could have a serious legal and reputational consequence.

Financial Regulatory Reform

On July 21, 2010, the Dodd-Frank Wall Street Reform and Consumer Protection Act (the "**Dodd-Frank Act**") was enacted in the United States. The Dodd-Frank Act provides a broad framework for sweeping financial regulatory reforms designed to enhance supervision and regulation of financial firms and promote stability in the financial markets. The legislation establishes a new regulator, the Financial Stability Oversight Council, to monitor systemic risks posed by financial services companies and their activities. In addition to the statutory requirements imposed by the Dodd-Frank Act, the legislation also delegates authority to U.S. banking and securities regulators, such as the Federal Reserve Board (the Bank's primary U.S. banking regulator), to adopt rules imposing additional restrictions. For example, U.S. banking regulators are authorized, among other things, to impose heightened prudential standards, such as increased capital, leverage and liquidity requirements, and limits on risky activities, on banks and their holding companies as well as certain non-bank financial institutions designated as systemically important. In imposing such heightened prudential standards on foreign-based bank holding companies, such as the Bank, the Federal Reserve Board is directed to take into account the principle of national treatment and of equality of competitive opportunity, and the extent to which the foreign bank is subject to home country standards comparable to those applied to financial companies in the United States.

The Dodd-Frank Act also restricts the ability of banking entities to sponsor or invest in private equity or hedge funds or engage in certain proprietary trading activities unrelated to serving customers (commonly referred to as the "**Volcker Rule**"). Among the exceptions to the Volcker Rule is an exemption for foreign banks, but generally only with respect to activity conducted solely outside the United States. Under recently proposed regulations, the exception would not apply if the Bank were to conduct trades through an exchange or clearing entity in the U.S. In addition, the Dodd-Frank Act will require enhanced regulation of the over-the-counter derivatives market, including, among other things, broadening the scope of derivatives instruments subject to regulation, subjecting certain derivatives market participants to registration, regulation and supervision, requiring clearing and exchange trading

and imposing capital and margin requirements on certain derivatives market participants. In addition, the Dodd-Frank Act will limit the ability of some uninsured U.S. branches of foreign banks to engage in swaps activities, requiring these activities to be conducted through affiliates.

While certain portions of the Dodd-Frank Act are effective immediately, other portions are subject to extended transition periods and a lengthy rulemaking process making it difficult at this time to assess the overall impact any final rules could have on the Bank or the financial industry as a whole. Implementation of the Dodd-Frank Act and subsequent rulemakings could result in increased costs and limitations on the Bank's business activities.

USE OF PROCEEDS

Unless otherwise specified in the applicable Supplement and, except with respect to Sustainable Notes, we intend to use the net proceeds we receive from the sale of the Notes for general corporate purposes. In addition, we expect that we or our affiliates may use a portion of the net proceeds to hedge our obligations under the Notes. We or our affiliates may close out our or their hedge on or before the maturity date.

With Respect to Sustainable Notes Only:

Sustainability Bond Framework

If specified in the applicable Pricing Supplement for a particular issuance of Notes, the net proceeds of such issue of the Notes will be used for the financing and/or refinancing, in whole or in part, of future and existing eligible businesses and eligible projects, including the Bank's own operations, that fall within the Eligible Categories (as defined below) in accordance with the National Bank of Canada Sustainability Bond Framework dated September 26, 2018 (as may be amended from time to time) and available on the following webpage: nbc.ca/content/dam/bnc/a-propos-de-nous/relations-investisseurs/fonds-propres-et-dette/nbc-sustainability-bond-framework.pdf (the "**Framework**") and such Notes, "**Sustainable Notes**"). The Framework addresses the four core components of the International Capital Market Association's Sustainability Bond Guidelines dated June 2018, namely:

- Use of Proceeds
- Project Selection and Evaluation Process
- Management of Proceeds
- Reporting.

The Bank's look-back period for any financing using the proceeds of Sustainable Notes is 36 months prior to the date of issuance of the relevant Sustainable Notes.

"**Eligible Categories**" consist of the following five categories (all as more fully described in the Framework):

- Renewable energy
- Sustainable buildings
- Low-carbon transportation
- Affordable housing
- Access to basic and essential services

Where a business derives 90% or more of revenues from activities in Eligible Categories, it will be considered as eligible for an allocation of the proceeds of the Sustainable Notes. In such instances, the use of proceeds can be used by the business for general purposes, so long as this financing does not fund expansion into activities falling outside the Eligible Categories.

The Bank shall select eligible businesses and eligible projects that fall within the Eligible Categories in accordance with the Framework, with evaluation and review conducted by the Bank's ESG programme officers and Sustainability Bond Committee (as described in more detail in the Framework).

The net proceeds of the Sustainable Notes will be deposited in the general funding accounts of the Bank. An amount equal to the net proceeds will be earmarked for allocation in a sustainability bond register (the "**Sustainability Bond Register**") (which the Bank will establish in relation to Sustainable Notes issued by the Bank for the purpose of recording the eligible businesses and eligible projects and allocation of the net proceeds from Sustainable Notes to such eligible businesses and eligible projects) in accordance with the Framework.

The Bank intends to maintain an aggregate amount of assets relating to eligible businesses and eligible projects that is at least equal to the aggregate net proceeds of all Sustainable Notes that are outstanding from time to time. The Bank intends to fully allocate the Sustainable Notes within a period of 18 months from issuance.

Until an amount equal to the net proceeds of the Notes have been fully allocated, such proceeds may be invested according to the Bank's normal liquidity management activities.

Within one year of the issuance of Sustainable Notes, the Bank expects to publish a sustainability bond report (the "**Sustainability Bond Report**") on its website. The Sustainability Bond Report will be updated every year until complete allocation of the proceeds from the relevant Sustainable Notes, and thereafter, as necessary in case of new developments.

The Sustainability Bond Report is expected to contain at least the following:

(a) Confirmation that the use of proceeds of the relevant Sustainable Notes complies with the Framework

(b) The amount of proceeds allocated to each Eligible Category

(c) For each Eligible Category, one or more examples of eligible businesses and eligible projects financed, in whole or in part, by the proceeds obtained from the relevant Sustainable Notes, including their general details (brief description, location, stage — construction or operation)

(d) The balance of unallocated net proceeds

(e) Impact reporting elements as described below.

Where feasible, the Sustainability Bond Report will include qualitative and (if reasonably practicable) quantitative environmental and social performance indicators. Performance indicators may change from year to year.

Prior to the first anniversary of the issue of Sustainable Notes by the Bank, the Bank intends to instruct a qualified external reviewer to review the eligible businesses and eligible projects financed by Sustainable Notes issued by the Bank, in order to assess compliance with the Framework. It is expected that this review will be carried out annually until the full allocation of the net proceeds from the relevant Sustainable Notes. It is expected that the Bank will post the external review report on its website.

Pursuant to the Framework a second party opinion has been obtained from an appropriate second party opinion provider. The second party opinion is available on: nbc.ca/content/dam/bnc/a-propos-de-nous/relations-investisseurs/fonds-propres-et-dette/nbc-sustainability-bond-second-opinion.pdf.

ANY WEBSITES INCLUDED OR REFERRED TO IN THIS OFFERING CIRCULAR ARE FOR INFORMATION PURPOSES ONLY AND DO NOT FORM PART OF THIS OFFERING CIRCULAR.

DESCRIPTION OF THE NOTES

General Terms of the Notes

We intend to issue Notes from time to time in one or more series (each, a "**Series**") having an aggregate amount of up to U.S.$3,500,000,000.

The specific terms of the Notes of any offering in any Series issued under this Offering Circular will be set forth in the applicable Supplement. This section describes only certain terms that may or may not apply to the Notes that you purchase. As discussed above, we expect to issue additional types of Notes, the terms of which will be described in the applicable Supplement. This Offering Circular may not be used to consummate sales of any Notes unless accompanied by the applicable Supplement or Supplements relating to such Notes.

The Notes will be issued under an indenture dated as of July 10, 2015 (the "**Base Indenture**"), as amended and supplemented by a First Supplemental Indenture dated as of June 9, 2020 (the "**First Supplemental Indenture**"), and, together with the Base Indenture, as may be further amended or supplemented from time to time, the "**Indenture**") each among the Bank, as Issuer and as Calculation Agent, National Bank of Canada, New York Branch ("**NBCNY**"), as Guarantor, and The Bank of New York Mellon, as Trustee (the "**Trustee**"), as Paying Agent (the "**Paying Agent** ") and as Note Registrar (the "**Note Registrar**"), in respect of any Notes with respect to which it is named as such in the applicable Supplement.

The summaries in this Offering Circular of certain provisions of the Notes, the Guarantee and the Indenture do not purport to be complete and such summaries are subject to the detailed provisions of the Indenture to which reference is hereby made for a full description of such provisions, including the definition of certain terms used, and for other information regarding the Notes and the Guarantee.

A copy of the Indenture can be obtained by writing to us at the following address: 600 De La Gauchetière Street West, 24th Floor, Montréal, Québec, Canada H3B 4L2, Attention: Investor Relations, or by calling us at 1-866-517-5455.

Status of the Notes

The Notes will constitute deposits for purposes of the Bank Act and 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. Notes that are Bail-inable Notes (as defined herein) are subject to the Canadian bank resolution powers as discussed under *"Description of the Notes—Canadian Bank Resolution Powers"*.

The Notes will not be deposits insured under either the U.S. Federal Deposit Insurance Act or the *Canada Deposit Insurance Corporation Act* (Canada).

Guarantee

Pursuant to the Guarantee under the Indenture, NBCNY unconditionally and irrevocably guarantees to the holders of the Notes the payments of the amount (if any) due and payable on the Notes at maturity, redemption or acceleration (the "**Redemption Amount**"), together with interest (if any) or other amounts payable on the Notes, if such amounts have not been received by the holders at the time such payment is due and payable (after giving effect to all the applicable cure periods). The Guarantee (i) is a direct, general, unconditional, unsecured and unsubordinated obligation of the Guarantor and ranks equally with all other present and future unconditional, unsecured and unsubordinated obligations of the Guarantor, except those mandatorily preferred by law, (ii) is a continuing guarantee, (iii) is irrevocable and (iv) is a guarantee of payment of the amounts due and payable under the Notes and not of collection. For more information regarding the Guarantee, see "*The Guarantee.*"

Form and Title of Notes

The Notes will be issued as one or more Global Notes registered in the name of a nominee of DTC, and deposited on behalf of the purchaser (or such other account as the purchaser may direct) with The Bank of New York

Mellon as custodian for DTC. Purchasers of Notes will have a book-entry beneficial interest in the Global Notes. The beneficial interest in the Global Notes will be held through the Direct Participants and Indirect Participants (as defined below), including, if applicable, CDS, Euroclear and Clearstream. When we refer to "you" in this Offering Circular, we mean those who invest in the beneficial interest of the Notes being offered by this Offering Circular; when we refer to "your Notes" in this Offering Circular, we mean the Notes in which you hold a direct or indirect interest.

We will issue Notes only as registered Notes, which means that the Note Registrar will keep a register (the "**Register**") for the registration and registration of transfers of the Notes. Each Note will be numbered serially with an identifying number that will be recorded in the Register. The holder of any Note will (except as otherwise required by law) be treated as its absolute owner for all purposes (whether or not it is overdue and regardless of any notice of ownership, trust or any interest in it, any writing on it, or its theft or loss), and no person will be liable for so treating the holder.

Payments of Interest, Additional Amounts and Redemption Amount

Method of Payment

The Bank will remit to the Paying Agent, in its office in New York, New York, for further remittance to the holders of the physical notes and to DTC for the Global Notes, the Redemption Amount (if any), interest or other amounts payable on the Notes. Upon receipt in full of such amounts by the holders of the physical notes and by DTC with respect to the Global Notes, the Bank and the Guarantor will be discharged from any further obligation with regard to such payments. No person other than the holder of such Global Note shall have any claim against the Bank or, as the case may be, the Guarantor in respect of any payments due on that Global Note.

DTC's practice is to credit Direct Participants' (as defined below) accounts on the payment date in accordance with their respective holdings shown on DTC's records unless DTC has reason to believe that it will not receive payment on the payment date. Payments by Direct Participants and Indirect Participants (as defined below) to Beneficial Owners will be governed by standing instructions and customary practices, as is the case with securities held for the accounts of customers in bearer form or registered in "street name," and will be the responsibility of such Participant and not of DTC, the Trustee, the Bank or the Guarantor, subject to any statutory or regulatory requirements as may be in effect from time to time. Payment of the Redemption Amount, interest or other amounts payable on the Global Notes to DTC is the responsibility of ours, the Guarantor, or the Trustee, disbursement of such payments to Direct Participants is the responsibility of DTC, and disbursement of such payments to the Beneficial Owners shall be the responsibility of Direct Participants and Indirect Participants through whom such Beneficial Owners own interests in the Global Notes.

Presentation of Physical Notes

Payments of the Redemption Amount (if any), in respect of physical notes, will be made in the manner provided above against surrender (or, in the case of partial payment of any sum due, endorsement) of the physical notes.

Imposition of Exchange Controls and other Limitations

If the Bank reasonably determines that a payment on the Notes cannot be made in the Specified Currency due to: (A) restrictions imposed by the government of such currency or any agency or instrumentality thereof or any monetary authority in such country; or (B) the Specified Currency no longer being used by the government of the country issuing such currency or for the settlement of transactions by public institutions in that country or within the international banking community, then in the case of (A) above, the Bank shall make such payment in U.S. dollars and in the case of (B) above, the Bank at its discretion, shall make such payment either in U.S. dollars or in another currency available to the Bank for such purposes in connection with the Notes (a "**Substitute Currency**"), subject in any case to any applicable laws and regulations. The amount of U.S. dollars or Substitute Currency to be paid in connection with any payment shall be the amount of U.S. dollars or Substitute Currency, as applicable, that could be purchased by the Bank with the amount of the relevant currency payable on the date the payment is due, at the rate for sale in financial transactions of U.S. dollars or Substitute Currency (for delivery in the Financial Center of the Specified Currency two Business Days later) quoted by that bank at 10:00 a.m. local time in the Financial Center of the relevant currency, on the second Business Day prior to the date the payment is due or, if no such rate is available at an appropriate market rate of exchange determined in the reasonable discretion of the Calculation Agent.

Interest

If the applicable Supplement specifies that Notes of any offering in any Series shall bear interest, ("**Interest Paying Notes**"), interest will be payable on each Interest Payment Date, and will bear interest at either:

- a fixed rate specified in the applicable Supplement (a "**Fixed Rate Note**"); or
- a floating rate specified in the applicable Pricing Supplement determined by reference to an interest rate basis, which may be adjusted by a spread (as defined below) (a "**Floating Rate Note**") determined:

  (i) on the basis of a reference rate appearing on the agreed screen page of a commercial quotation service;

  (ii) on the same basis as the floating rate that would have applied if the Issuer had entered into a schedule and confirmation and credit support annex, if applicable, for the relevant Series of Notes in the relevant Specified Currency entered into by the Bank and the holder of such Notes incorporating the ISDA Definitions;

  (iii) for SOFR Rate Notes (as defined below), on the basis of a base rate determined in accordance with the provisions described under "*Description of the Notes—Interest—Floating Rate Notes—SOFR Rate Notes;"* or

  (iv) on such other basis as may be agreed between the Bank and the relevant Agent(s),

as set out in the applicable Pricing Supplement. The Margin (if any) relating to such floating rate will be agreed between the Bank and the relevant Agent(s) for each Series of Floating Rate Notes as set out in the applicable Pricing Supplement.

Unless otherwise provided in the applicable Supplement, each Interest Paying Note will bear interest from the relevant Interest Commencement Date or from the most recent date on which interest on that Note has been paid at the fixed or floating rate specified in the applicable Supplement until the Redemption Amount has been paid or made available for payment at maturity, redemption or repayment, as applicable, of the Notes. Interest on the Interest Paying Notes will be payable on each Interest Payment Date (except as described in the applicable Supplement) and at maturity, redemption or repayment, as applicable. Unless otherwise indicated in the applicable Supplement, interest payments in respect of the Interest Paying Notes will equal the amount of interest accrued during the Interest Period to which such Interest Payment Date relates. If the maturity of the Notes of any Series is accelerated, interest will be paid on such Notes through and excluding the related date of accelerated payment.

Unless otherwise specified in the applicable Supplement, the "**record date**" in respect of each Interest Payment Date will be the close of business on the date that is three Business Days preceding such Interest Payment Date.

In respect of each Interest Payment Date, interest will be payable to the person in whose name a Note is registered in the Register at the close of business on the related record date, except that:

- if we fail to pay the interest due on an Interest Payment Date, the defaulted interest will be paid to the person in whose name the Note is registered in the Register at the close of business on the record date we will establish for the payment of defaulted interest; and
- interest payable at maturity, redemption or repayment will be payable to the holders in whose name the Notes are registered in the Register with respect to the Physical Notes and to DTC with respect to the Global Notes.

(a) Fixed Rate Notes

Each Fixed Rate Note will bear interest at the rate or rates per annum specified in the applicable Supplement in arrears on the Interest Payment Dates specified in the applicable Supplement.

(b) Floating Rate Notes

Each Floating Rate Note will bear interest at the rate specified in the applicable Supplement in arrears on either:

- the Specified Interest Payment Date(s) in each year specified in the applicable Supplement (each, an "**Interest Payment Date**"); or
- if no Specified Interest Payment Date(s) are specified in the applicable Supplement, each date (each, an "**Interest Payment Date**") which falls the number of months or other period specified as the "Specified Period" in the applicable Supplement after the preceding Interest Payment Date or, in the case of the first Interest Payment Date, after the Interest Commencement Date.

The Rate of Interest will be specified in, or calculated or determined in accordance with the provisions of, the applicable Supplement.

(i) Screen Rate Determination

Where the "Screen Rate Determination" is specified in the applicable Pricing Supplement, the Rate of Interest for each Interest Period will be determined by the Calculation Agent on the following basis:

(A) the Calculation Agent will determine the rate for deposits or, as the case may require, the arithmetic mean (rounded, if necessary, to the nearest ten thousandth of a percentage point, 0.00005 being rounded upwards) of the rates for deposits in the relevant currency for a period of the duration of the relevant Interest Period on the Relevant Screen Page as of the Relevant Time on the relevant Interest Determination Date;

(B) if, on any Interest Determination Date, no such rate for deposits so appears or, as the case may be, if fewer than two such rates for deposits so appear or if the Relevant Screen Page is unavailable, the Calculation Agent will request appropriate quotations and will determine the arithmetic mean (rounded as described above) of the rates at which deposits in the relevant currency are offered by the Reference Banks at approximately the Relevant Time on the Interest Determination Date to prime banks in the London interbank market in the case of LIBOR for a period of the duration of the relevant Interest Period and in an amount that is representative for a single transaction in the relevant market at the relevant time;

(C) if, on any Interest Determination Date, only two or three rates are so quoted, the Calculation Agent will determine the arithmetic mean (rounded as described above) of the rates so quoted; or

(D) if fewer than two rates are so quoted, the Calculation Agent will determine the arithmetic mean (rounded as described above) of the rates quoted by four major banks in the Financial Center as selected by the Calculation Agent, at approximately 11.00 a.m. (Financial Center time) on the first day of the relevant Interest Period for loans in the relevant currency to leading European banks for a period for the duration of the relevant Interest Period and in an amount that is representative for a single transaction in the relevant market at the relevant time,

and the Rate of Interest applicable to such Notes during each Interest Period will be the sum of the Margin specified in the applicable Pricing Supplement and the rate or, as the case may be, the arithmetic mean (rounded as described above) of the rates so determined, provided however that if the Calculation Agent is unable to determine a rate or, as the case may be, an arithmetic mean of rates in accordance with the above provisions in relation to any Interest Period, the Rate of Interest applicable to such Notes during such Interest Period will be the sum of the Margin and the rate or, as the case may be, the arithmetic mean (rounded as described above) of the rates determined in relation to such Notes in respect of the last preceding Interest Period.

Benchmark Transition Event for U.S. dollar LIBOR Notes

Notwithstanding the above, with respect to U.S. dollar-denominated LIBOR Floating Rate Notes, if the Issuer or its designee determines on or prior to the relevant Interest Determination Date for U.S. dollar LIBOR Notes that a Benchmark Transition Event and its related Benchmark Replacement Date (each as defined below) have occurred with respect to U.S. dollar LIBOR, then the provisions set forth below under the heading "*Effect of Benchmark*

Transition Event for U.S. dollar LIBOR Notes," which we refer to as the benchmark replacement provisions, will thereafter apply to all determinations of the rate of interest payable on such U.S. dollar LIBOR Note.

For the avoidance of doubt, in accordance with the benchmark replacement provisions, after a Benchmark Transition Event and its related Benchmark Replacement Date have occurred, the amount of interest that will be payable for each interest period on the U.S. dollar LIBOR Notes will be an annual rate equal to the sum of the Benchmark Replacement (as defined below) and the applicable margin.

Effect of Benchmark Transition Event for U.S. dollar LIBOR Notes

(a) Benchmark Replacement. If the Issuer or its designee determines that a Benchmark Transition Event and its related Benchmark Replacement Date have occurred prior to the Reference Time in respect of any determination of the Benchmark on any date, the Benchmark Replacement will replace the then-current Benchmark for all purposes relating to the U.S. dollar LIBOR Notes in respect of such determination on such date and all determinations on all subsequent dates.

(b) Benchmark Replacement Conforming Changes. In connection with the implementation of a Benchmark Replacement, the Issuer or its designee will have the right to make Benchmark Replacement Conforming Changes from time to time. No such change shall affect the Trustee's or the Calculation Agent's own rights, duties or immunities under the Indenture or otherwise without their consent.

(c) Decisions and Determinations. Any determination, decision or election that may be made by the Issuer or its designee pursuant to the benchmark replacement provisions described herein, including any determination with respect to a tenor, rate or adjustment or of the occurrence or non-occurrence of an event, circumstance or date and any decision to take or refrain from taking any action or any selection:

- will be conclusive and binding absent manifest error, provided that neither the Trustee nor the Calculation Agent shall have any responsibility to determine whether any manifest error has occurred and may conclusively assume that no manifest error has occurred and shall suffer no liability in so assuming;
- if made by the Issuer, will be made in the Issuer's sole discretion;
- if made by the Issuer's designee, will be made after consultation with the Issuer, and the designee will not make any such determination, decision or election to which the Issuer reasonably objects; and
- notwithstanding anything to the contrary in the Indenture or the Notes, shall become effective without consent from the holders of the Notes or any other party.

Any determination, decision or election pursuant to the benchmark replacement provisions not made by the Issuer's designee will be made by the Issuer on the basis as described above. The designee shall have no liability for not making any such determination, decision or election. In addition, the Issuer may designate an entity (which may be its affiliate) to make any determination, decision or election that the Issuer has the right to make in connection with the benchmark replacement provisions set forth above. If the Issuer's designee is unable to determine whether a Benchmark Transition Event has occurred and/or has not selected the Benchmark Replacement, then, in such case, the Issuer shall make such determination or select the Benchmark Replacement, as the case may be. If the Benchmark Replacement has not yet been determined as of any Interest Determination Date in accordance with the benchmark replacement provisions and the order set forth in the definition of "Benchmark Replacement", then the interest rate for the next Interest Determination Date will be set equal to the interest rate on the last Interest Determination Date.

Certain Defined Terms. As used herein:

"*Benchmark*" means, initially, U.S. dollar LIBOR; provided that if a Benchmark Transition Event and its related Benchmark Replacement Date have occurred with respect to U.S. dollar LIBOR or the then-current Benchmark, then "Benchmark" means the applicable Benchmark Replacement.

"*Benchmark Replacement*" means the Interpolated Benchmark with respect to the then-current Benchmark, plus the Benchmark Replacement Adjustment for such Benchmark; provided that if the Issuer or its designee cannot determine the Interpolated Benchmark as of the Benchmark Replacement Date, then "Benchmark Replacement" means the first alternative set forth in the order below that can be determined by the Issuer or its designee, as of the Benchmark Replacement Date:

(1) the sum of: (a) Term SOFR and (b) the Benchmark Replacement Adjustment;

(2) the sum of: (a) Compounded SOFR and (b) the Benchmark Replacement Adjustment;

(3) the sum of: (a) the alternate rate of interest that has been selected or recommended by the Relevant Governmental Body as the replacement for the then-current Benchmark for the applicable Corresponding Tenor and (b) the Benchmark Replacement Adjustment;

(4) the sum of: (a) the ISDA Fallback Rate and (b) the Benchmark Replacement Adjustment; and

(5) the sum of: (a) the alternate rate of interest that has been selected by the Issuer or its designee as the replacement for the then-current Benchmark for the applicable Corresponding Tenor giving due consideration to any industry-accepted rate of interest as a replacement for the then-current Benchmark for U.S. dollar-denominated floating rate notes at such time and (b) the Benchmark Replacement Adjustment.

"*Benchmark Replacement Adjustment*" means the first alternative set forth in the order below that can be determined by the Issuer or its designee as of the Benchmark Replacement Date:

(1) the spread adjustment, or method for calculating or determining such spread adjustment, (which may be a positive or negative value or zero) that has been selected or recommended by the Relevant Governmental Body for the applicable Unadjusted Benchmark Replacement;

(2) if the applicable Unadjusted Benchmark Replacement is equivalent to the ISDA Fallback Rate, then the ISDA Fallback Adjustment; or

(3) the spread adjustment (which may be a positive or negative value or zero) that has been selected by the Issuer or its designee giving due consideration to any industry-accepted spread adjustment, or method for calculating or determining such spread adjustment, for the replacement of the then-current Benchmark with the applicable Unadjusted Benchmark Replacement for U.S. dollar-denominated floating rate notes at such time.

"*Benchmark Replacement Conforming Changes*" means, with respect to any Benchmark Replacement, any technical, administrative or operational changes (including changes to the definition of "interest period", timing and frequency of determining rates and making payments of interest, rounding of amounts or tenors (including changes to the definition of "Corresponding Tenor" solely when such tenor is longer than the Interest Period), and other administrative matters) that the Issuer or its designee decides may be appropriate to reflect the adoption of such Benchmark Replacement in a manner substantially consistent with market practice (or, if the Issuer or its designee decide that adoption of any portion of such market practice is not administratively feasible or if the Issuer or its designee determine that no market practice for use of the Benchmark Replacement exists, in such other manner as the Issuer or its designee determines is reasonably practicable).

"*Benchmark Replacement Date*" means the earliest to occur of the following events with respect to the then-current Benchmark:

(1) in the case of clause (1) or (2) of the definition of "Benchmark Transition Event," the later of (a) the date of the public statement or publication of information referenced therein and (b) the date on which the administrator of the Benchmark permanently or indefinitely ceases to provide the Benchmark; or

(2) in the case of clause (3) of the definition of "Benchmark Transition Event," the date of the public statement or publication of information referenced therein.

For the avoidance of doubt, if the event giving rise to the Benchmark Replacement Date occurs on the same day as, but earlier than, the Reference Time in respect of any determination, the Benchmark Replacement Date will be deemed to have occurred prior to the Reference Time for such determination.

"*Benchmark Transition Event*" means the occurrence of one or more of the following events with respect to the then-current Benchmark:

(1) a public statement or publication of information by or on behalf of the administrator of the Benchmark announcing that such administrator has ceased or will cease to provide the Benchmark, permanently or indefinitely, provided that, at the time of such statement or publication, there is no successor administrator that will continue to provide the Benchmark;

(2) a public statement or publication of information by the regulatory supervisor for the administrator of the Benchmark, the central bank for the currency of the Benchmark, an insolvency official with jurisdiction over the administrator for the Benchmark, a resolution authority with jurisdiction over the administrator for the Benchmark or a court or an entity with similar insolvency or resolution authority over the administrator for the Benchmark, which states that the administrator of the Benchmark has ceased or will cease to provide the Benchmark permanently or indefinitely, provided that, at the time of such statement or publication, there is no successor administrator that will continue to provide the Benchmark; or

(3) a public statement or publication of information by the regulatory supervisor for the administrator of the Benchmark announcing that the Benchmark is no longer representative.

"*Compounded SOFR*" means the compounded average of SOFRs for the applicable Corresponding Tenor, with the rate, or methodology for this rate, and conventions for this rate being established by the Issuer or its designee in accordance with:

(1) the rate, or methodology for this rate, and conventions for this rate selected or recommended by the Relevant Governmental Body for determining compounded SOFR; provided that:

(2) if, and to the extent that, the Issuer or its designee determine that Compounded SOFR cannot be determined in accordance with clause (1) above, then the rate, or methodology for this rate, and conventions for this rate that have been selected by the Issuer or its designee giving due consideration to any industry-accepted market practice for U.S. dollar-denominated floating rate notes at such time.

For the avoidance of doubt, the calculation of Compounded SOFR shall exclude the Benchmark Replacement Adjustment and the applicable margin.

"*Corresponding Tenor*" with respect to a Benchmark Replacement means a tenor (including overnight) having approximately the same length (disregarding business day adjustment) as the applicable tenor for the then-current Benchmark.

"*Federal Reserve Bank of New York's Website*" means the website of the FRBNY at http://www.newyorkfed.org, or any successor source.

"*Interpolated Benchmark*" with respect to the Benchmark means the rate determined for the Corresponding Tenor by interpolating on a linear basis between: (1) the Benchmark for the longest period (for which the Benchmark is available) that is shorter than the Corresponding Tenor and (2) the Benchmark for the shortest period (for which the Benchmark is available) that is longer than the Corresponding Tenor.

"*ISDA Definitions*" means the 2006 ISDA Definitions published by ISDA or any successor thereto, as amended or supplemented from time to time, or any successor definitional booklet for interest rate derivatives published from time to time.

"*ISDA Fallback Adjustment*" means the spread adjustment (which may be a positive or negative value or zero) that would apply for derivatives transactions referencing the ISDA Definitions to be determined upon the occurrence of an index cessation event with respect to the Benchmark for the applicable tenor.

"*ISDA Fallback Rate*" means the rate that would apply for derivatives transactions referencing the ISDA Definitions to be effective upon the occurrence of an index cessation date with respect to the Benchmark for the applicable tenor excluding the applicable ISDA Fallback Adjustment.

"*Reference Time*" with respect to any determination of the Benchmark means (1) if the Benchmark is U.S. dollar LIBOR, 11:00 a.m. (London time) on the relevant LIBOR Interest Determination Date, and (2) if the Benchmark is not U.S. dollar LIBOR, the time determined by the Issuer or its designee in accordance with the Benchmark Replacement Conforming Changes.

"*Relevant Governmental Body*" means the Federal Reserve Board and/or the FRBNY, or a committee officially endorsed or convened by the Federal Reserve Board and/or the FRBNY or any successor thereto.

"*SOFR*" with respect to any day means the secured overnight financing rate published for such day by the FRBNY, as the administrator of the benchmark, (or a successor administrator) on the Federal Reserve Bank of New York's Website.

"*Term SOFR*" means the forward-looking term rate for the applicable Corresponding Tenor based on SOFR that has been selected or recommended by the Relevant Governmental Body.

"*Unadjusted Benchmark Replacement*" means the Benchmark Replacement excluding the Benchmark Replacement Adjustment.

(ii) ISDA Rate Notes

Where "ISDA Determination" is specified in the applicable Supplement as the manner in which the Rate of Interest is to be determined, the Rate of Interest for each Interest Period will be the relevant ISDA Rate plus or minus (as indicated in the applicable Pricing Supplement) the Margin, if any. "**ISDA Rate**" for an Interest Period means a rate equal to the Fixed Rates, Fixed Amounts, Fixed Prices, Floating Rates, Floating Amounts or Floating Prices, as the case may be, or as otherwise specified in the applicable Supplement, as would have applied (regardless of any event of default or termination event or tax event thereunder) if the Bank had entered into a schedule and confirmation and credit support annex, if applicable, in respect of the relevant Series of Notes with the holder of such Note under the terms of an agreement to which the ISDA Definitions applied and under which:

- the Fixed Rate Payer, Fixed Amount Payer, Floating Rate Payer or, as the case may be, Floating Amount Payer is the Bank (as specified in the applicable Supplement);
- the Effective Date is the Interest Commencement Date;
- the Floating Rate Option (which may refer to a Rate Option or a Price Option, specified in the ISDA Definitions) is as specified in the applicable Supplement;
- the Designated Maturity is the period specified in the applicable Supplement;
- the Bank is the Calculation Agent;
- the Calculation Periods are the Interest Periods;
- the Payment Dates are the Interest Payment Dates;
- the relevant Reset Date is either (i) if the applicable Floating Rate Option is based on LIBOR, the first day of that Interest Period or (ii) in any other case, as specified in the applicable Supplement;
- the Calculation Amount is the principal amount of such Note;
- the Day Count Fraction applicable to the calculation of any amount is that specified in the applicable Supplement or, if none is so specified, as may be determined in accordance with the ISDA Definitions;
- the Business Day Convention applicable to any date is that specified in the applicable Supplement or, if none is so specified, as may be determined in accordance with the ISDA Definitions; and

- the other terms are as specified in the applicable Supplement.

For the purposes of this section (b)(ii), "Floating Rate," "Calculation Agent," "Floating Rate Option," "Designated Maturity" and "Reset Date" have the meanings given to those terms in the ISDA Definitions.

(iii) SOFR Rate Notes

Where the applicable Pricing Supplement relates to Notes that bear interest at a rate derived from SOFR, the manner in which the interest rate for such SOFR Rate Note shall be determined shall be as follows, unless otherwise provided for or modified in the applicable Pricing Supplement. The applicable Pricing Supplement shall state and describe that such Note is a SOFR Rate Note, the Base Rate, the Margin, the Interest Periods, the Interest Payment Dates, Business Day Convention, any other terms relating to the particular method of calculating the interest rate for such Note (including any applicable payment delay, lockout or suspension period, lookback or observation shift) and any other terms applicable specifically to such SOFR Rate Note.

Base Rate. The interest rate on each SOFR Rate Note for each Interest Period will be determined by reference to an interest rate basis (a "**Base Rate"**), plus or minus a number of basis points (one basis point equals one-hundredth of a percentage point) (the "**Margin**" or "**Spread**"), if any, until the principal thereof is paid or made available for payment. The applicable Pricing Supplement will designate the Margin and which of the following Base Rates is applicable to the related SOFR Rate Note (each such Base Rate, a "**SOFR Rate**"):

(a) Compounded SOFR (as defined below) (a "**Compound SOFR Note**");

(b) Average SOFR (as defined below) (an "**Average SOFR Note**");

(c) Term SOFR (as defined below) (a "**Term SOFR Note**"); or

(d) such other Base Rate as may be specified in such Pricing Supplement and agreed in advance by the Calculation Agent.

The Base Rate for the Interest Period plus the Spread, if any, are referred to herein as the "**Interest Rate**." The applicable Pricing Supplement will also specify a maximum Interest Rate, or "ceiling" or "cap," that the Interest Rate may not exceed, and also a minimum Interest Rate, or "floor," that the Interest Rate may not fall below. Notwithstanding the previous sentence, the Interest Rate for any Interest Period shall not be less than zero.

Compound SOFR Notes

Unless otherwise provided for or modified in the applicable Pricing Supplement, Compound SOFR Notes will bear interest at a rate per annum equal to Compounded SOFR (as defined below) plus the Spread.

Each "spread" is the number of basis points (one one-hundredth of a percentage point) to be added to the accrued interest compounding factor for an Interest Period.

A. Compound SOFR Notes based on a SOFR Index

The amount of interest accrued and payable on the Compound SOFR Notes for each Interest Period will be calculated by the Calculation Agent on each SOFR Interest Payment Determination Date (as defined below) and will be equal to the outstanding principal amount of such Notes multiplied by the product of:

(a) the interest rate for the relevant Interest Period

- *multiplied by* –

(b) the quotient of the actual number of calendar days in such Observation Period (as defined below) divided by 360.

Notwithstanding the foregoing, in no event will the Interest Rate payable for any Interest Period be less than zero percent.

Unless otherwise specified or modified in the applicable Pricing Supplement, on each Interest Payment Date, accrued interest will be paid for the most recently completed Interest Period. With respect to any Interest Period, the accrued interest compounding factor or "**Compounded SOFR**" means the rate of return computed in accordance with the following formula (with the resulting percentage rounded, if necessary, to the nearest one hundred-thousandth of a percentage point, with 0.000005 being rounded upwards to 0.00001):

$$\left(\frac{SOFR\ Index_{End}}{SOFR\ Index_{Start}} - 1\right) x \frac{360}{d}$$

Where:

"*SOFR Index*$_{Start}$ = The SOFR Index value on the day which is two U.S. Government Securities Business Days (or such number of U.S. Government Securities Business Days as specified in the applicable Pricing Supplement) preceding the first date of the relevant Interest Period;

"*SOFR Index*$_{End}$ = The SOFR Index value on the SOFR Interest Payment Determination Date relating to the applicable Interest Payment Date (or in the final Interest Period, the maturity date); and

"*d*" is the number of calendar days in the relevant Observation Period.

For purposes of determining Compounded SOFR immediately above, "**SOFR Index**" means, with respect to any U.S. Government Securities Business Day:

(1) the SOFR Index published for such U.S. Government Securities Business Day as such value appears on the New York Federal Reserve's Website at 3:00 p.m. (New York time) on such U.S. Government Securities Business Day (the "**SOFR Index Determination Time**"); or

(2) if the SOFR Index specified in (1) above does not so appear, unless both a Benchmark Transition Event and its related Benchmark Replacement Date have occurred, the SOFR Index as published in respect of the first preceding U.S. Government Securities Business Day for which the SOFR Index was published on the New York Federal Reserve's Website.

"**SOFR Interest Payment Determination Date**" means the day that is two U.S. Government Securities Business Days (or such number of U.S. Government Securities Business Days as specified in the applicable Pricing Supplement) prior to the Interest Payment Date.

"**Observation Period**" means, in respect of each Interest Period, the period from, and including, the date two U.S. Government Securities Business Days (or such number of U.S. Government Securities Business Days as specified in the applicable Pricing Supplement) preceding the first date in such Interest Period to, but excluding, the date two U.S. Government Securities Business Days (or such number of U.S. Government Securities Business Days as specified in the applicable Pricing Supplement) preceding the Interest Payment Date for such Interest Period.

B. Compound SOFR Notes (without reference to a SOFR Index)

The amount of interest accrued and payable on the Compound SOFR Notes for each Interest Period will be calculated by the Calculation Agent on each SOFR Interest Determination Date (as defined below) and will be equal to the outstanding principal amount of such Notes multiplied by the product of:

(a) the sum of the accrued interest compounding factor plus the spread for the relevant Interest Period,

- multiplied by –

(b) the quotient obtained by dividing the actual number of calendar days in such Interest Period by 360.

Notwithstanding the foregoing, in no event will the Interest Rate payable for any Interest Period be less than zero percent.

Unless otherwise specified or modified in the applicable Pricing Supplement, on each Interest Payment Date, accrued interest will be paid for the most recently completed Interest Period. With respect to any Interest Period, the accrued interest compounding factor or "**Compounded SOFR**" means the rate of return of a daily compound interest investment computed in accordance with the following formula (with the resulting percentage rounded, if necessary, to the nearest one hundred-thousandth of a percentage point, with 0.000005 being rounded upwards to 0.00001):

$$\left[\prod_{i=1}^{do}\left(1+\frac{SOFRi\ x\ ni}{360}\right)-1\right]x\frac{360}{d}$$

Where:

"d_0", for any Interest Period, is the number of U.S. Government Securities Business Days in the relevant Interest Period.

"*i*" is a series of whole numbers from one to d_0, each representing the relevant U.S. Government Securities Business Days in chronological order from, and including, the first U.S. Government Securities Business Day in the relevant Interest Period.

"*SOFRi*", for any U.S. Government Securities Business Day "i" in the relevant Interest Period, is a reference rate equal to SOFR in respect of that day.

"n_i" is the number of calendar days in the relevant Interest Period from, and including, the U.S. Government Securities Business Day "i" to, but excluding, the following U.S. Government Securities Business Day.

"*d*" is the number of calendar days in the relevant Interest Period.

"**SOFR Interest Determination Date**" means the day that is the number of U.S. Government Securities Business Days prior to the Interest Payment Date in respect of the relevant Interest Period, as specified in the applicable Pricing Supplement.

In addition to defining the relevant Interest Periods and Interest Payment Dates, the applicable Pricing Supplement shall specify and describe, as applicable, any relevant interest commencement date, interest period end date, interest determination date, index maturity, rate cut-off date, any other terms relating to the particular method of calculating interest on the Compound SOFR Note (including any applicable payment delay, lockout or suspension period, lookback or observation shift) and any other terms applicable specifically to such Compound SOFR Note.

Average SOFR Notes

Unless otherwise provided for or modified in the applicable Pricing Supplement, Average SOFR Notes will bear interest at a rate per annum equal to Average SOFR (as defined below) plus the Spread.

With respect to any Interest Period, unless otherwise specified or modified in the applicable Pricing Supplement, "**Average SOFR**" will be calculated by the Calculation Agent on each SOFR Interest Determination Date (as defined below) as follows (with the resulting percentage being rounded, if necessary, to the nearest one hundred-thousandth of a percentage point, with 0.000005 being rounded upwards to 0.00001):

$$\frac{\sum_{i=1}^{d_0} SOFR_i \times n_i}{d}$$

Where:

"d_0", for any Interest Period, means the number of U.S. Government Securities Business Days (as defined below) in the relevant Interest Period;

"*i*" means a series of whole numbers from one to d_0, each representing the relevant U.S. Government Securities Business Days in chronological order from, and including, the first U.S. Government Securities Business Day in the relevant Interest Period;

"*SOFRi*", for any U.S. Government Securities Business Day "i" in the relevant Interest Period, is a reference rate equal to SOFR in respect of that day.

"n_i" is the number of calendar days in the relevant Interest Period from, and including, the U.S. Government Securities Business Day "i" to, but excluding, the following U.S. Government Securities Business Day.

"*d*" is the number of calendar days in the relevant Interest Period.

"**SOFR Interest Determination Date**" means the day that is the number of U.S. Government Securities Business Days prior to the Interest Payment Date in respect of the relevant Interest Period, as specified in the applicable Pricing Supplement.

In addition to the Interest Periods and the Interest Payment Dates, the applicable Pricing Supplement shall specify and describe, as applicable, any relevant interest commencement date, interest period end date, interest determination date, index maturity, rate cut-off date, any other terms relating to the particular method of calculating interest on the Average SOFR Note (including any applicable payment delay, lockout or suspension period, lookback or observation shift) and any other terms applicable specifically to such Average SOFR Note.

Term SOFR Notes

Unless otherwise provided for or modified in the applicable Pricing Supplement, Term SOFR Notes will bear interest at a rate per annum equal to Term SOFR (as defined below) (or Specified-Tenor Term SOFR (as defined below)), plus the Spread.

"**Term SOFR**" means the forward-looking term rate for the applicable Corresponding Tenor based on SOFR that has been selected or recommended by the Relevant Governmental Body.

"**Specified-Tenor Term SOFR**" means Term SOFR for the Corresponding Tenor, that is published by the Term SOFR Administrator at the Reference Time for any Interest Period, as determined by the Bank or its designee after giving effect to the Specified-Tenor Term SOFR Conventions.

"**Term SOFR Administrator**" means any entity designated by the Relevant Governmental Body as the administrator of Term SOFR (or any successor administrator).

"**Corresponding Tenor**" means (i) with respect to Term SOFR, three months or such number of months specified in the applicable Pricing Supplement, and (ii) with respect to a Benchmark Replacement, a tenor (including overnight) having approximately the same length (disregarding business day adjustment) as the applicable tenor for the then-current Benchmark.

"**Reference Time**" with respect to any determination of the Benchmark means (i) if the Benchmark is Specified-Tenor Term SOFR, the time determined by the Bank or its designee after giving effect to the Specified-Tenor Term SOFR Conventions, and (ii) if the Benchmark is not the Specified-Tenor Term SOFR, the time determined by the Bank or its designee after giving effect to the Benchmark Replacement Conforming Changes.

"**Specified-Tenor Term SOFR Conventions**" means any determination, decision, or election with respect to any technical, administrative, or operational matter (including with respect to the manner and timing of the publication of Specified-Tenor Term SOFR, or changes to the definition of "interest period," timing and frequency of determining Specified-Tenor Term SOFR with respect to each interest period and making payments of interest, rounding of amounts or tenors, and other administrative matters) that the Bank or its designee determines may be appropriate to reflect the use of Specified-Tenor Term SOFR as the Benchmark in a manner substantially consistent with market practice (or, if the Bank or its designee determines that adoption of any portion of such market practice is not administratively feasible or if the Bank or its designee determines that no market practice for the use of

Specified-Tenor Term SOFR exists, in such other manner as the Bank or its designee determines is reasonably necessary).

Certain Defined Terms

For purposes of determining Compounded SOFR, Average SOFR or Term SOFR (each as defined above), as applicable, "***SOFR***" means, with respect to any U.S. Government Securities Business Day:

(1) the Secured Overnight Financing Rate in respect of such U.S. Government Securities Business Day as published by the New York Federal Reserve, as the administrator of such rate (or a successor administrator), on the New York Federal Reserve's Website on or about 5:00 p.m. (New York City time) on the immediately following U.S. Government Securities Business Day; or

(2) if the Secured Overnight Financing Rate in respect of such U.S. Government Securities Business Day does not appear as specified in clause (1), unless both a Benchmark Transition Event and its related Benchmark Replacement Date have occurred, the Secured Overnight Financing Rate in respect of the last U.S. Government Securities Business Day for which such rate was published on the New York Federal Reserve's Website; or

(3) if a Benchmark Transition Event and its related Benchmark Replacement Date have occurred:

(i) the sum of: (a) the alternate rate of interest that has been selected or recommended by the Relevant Governmental Body as the replacement for the then-current Benchmark for the applicable Corresponding Tenor and (b) the Benchmark Replacement Adjustment; or

(ii) the sum of: (a) the ISDA Fallback Rate and (b) the Benchmark Replacement Adjustment; or

(iii) the sum of: (a) the alternate rate of interest that has been selected by the Bank or its designee as the replacement for the then-current Benchmark for the applicable Corresponding Tenor giving due consideration to any industry-accepted rate of interest as a replacement for the then-current Benchmark for U.S. dollar-denominated floating rate notes at such time and (b) the Benchmark Replacement Adjustment.

In connection with the SOFR definition above and *"—Effect of Benchmark Transition Event"* below, the following definitions will apply:

"***Benchmark***" means, initially, as applicable, Compound SOFR, Average SOFR, Term SOFR or such other Base Rate specified in the applicable Pricing Supplement; *provided that* if a Benchmark Transition Event and its related Benchmark Replacement Date have occurred with respect to such Compound SOFR, Average SOFR, Term SOFR or other Base Rate, as applicable, or the then-current Benchmark, then "Benchmark" means the applicable Benchmark Replacement.

"***Benchmark Replacement***" means the first alternative set forth in the order presented in clause (3) of the definition of "SOFR" that can be determined by the Bank or its designee as of the Benchmark Replacement Date. In connection with the implementation of a Benchmark Replacement, the Bank or its designee will have the right to make Benchmark Replacement Conforming Changes from time to time.

"***Benchmark Replacement Adjustment***" means the first alternative set forth in the order below that can be determined by the Bank or its designee as of the Benchmark Replacement Date:

(1) the spread adjustment, or method for calculating or determining such spread adjustment, (which may be a positive or negative value or zero) that has been selected or recommended by the Relevant Governmental Body for the applicable Unadjusted Benchmark Replacement;

(2) if the applicable Unadjusted Benchmark Replacement is equivalent to the ISDA Fallback Rate, then the ISDA Fallback Adjustment;

(3) the spread adjustment (which may be a positive or negative value or zero) that has been selected by the Bank or its designee giving due consideration to any industry-accepted spread adjustment, or method for calculating or determining such spread adjustment, for the replacement of the then-current

Benchmark with the applicable Unadjusted Benchmark Replacement for U.S. dollar-denominated floating rate notes at such time.

"***Benchmark Replacement Conforming Changes***" means, with respect to any Benchmark Replacement, any technical, administrative or operational changes (including changes to the definition of "interest period", timing and frequency of determining rates and making payments of interest, rounding of amounts or tenors (including changes to the definition of "Corresponding Tenor" solely when such tenor is longer than the Interest Period), and other administrative matters) that the Bank or its designee decides may be appropriate to reflect the adoption of such Benchmark Replacement in a manner substantially consistent with market practice (or, if the Bank or its designee decide that adoption of any portion of such market practice is not administratively feasible or if the Bank or its designee determine that no market practice for use of the Benchmark Replacement exists, in such other manner as the Bank or its designee determines is reasonably practicable).

"***Benchmark Replacement Date***" means the earliest to occur of the following events with respect to the then-current Benchmark:

(1) in the case of clause (1) or (2) of the definition of "Benchmark Transition Event," the later of (a) the date of the public statement or publication of information referenced therein and (b) the date on which the administrator of the Benchmark permanently or indefinitely ceases to provide the Benchmark; or

(2) in the case of clause (3) of the definition of "Benchmark Transition Event," the date of the public statement or publication of information referenced therein.

For the avoidance of doubt, if the event giving rise to the Benchmark Replacement Date occurs on the same day as, but earlier than, the Reference Time in respect of any determination, the Benchmark Replacement Date will be deemed to have occurred prior to the Reference Time for such determination.

"***Benchmark Transition Event***" means the occurrence of one or more of the following events with respect to the then-current Benchmark:

(1) a public statement or publication of information by or on behalf of the administrator of the Benchmark announcing that such administrator has ceased or will cease to provide the Benchmark, permanently or indefinitely, provided that, at the time of such statement or publication, there is no successor administrator that will continue to provide the Benchmark;

(2) a public statement or publication of information by the regulatory supervisor for the administrator of the Benchmark, the central bank for the currency of the Benchmark, an insolvency official with jurisdiction over the administrator for the Benchmark, a resolution authority with jurisdiction over the administrator for the Benchmark or a court or an entity with similar insolvency or resolution authority over the administrator for the Benchmark, which states that the administrator of the Benchmark has ceased or will cease to provide the Benchmark permanently or indefinitely, provided that, at the time of such statement or publication, there is no successor administrator that will continue to provide the Benchmark; or

(3) a public statement or publication of information by the regulatory supervisor for the administrator of the Benchmark announcing that the Benchmark is no longer representative.

"***Business Day***" means any day other than a day that is (i) a Saturday or Sunday, (ii) a day on which banking institutions generally in the City of New York, Montreal or Toronto are authorized or obligated by law, regulation or executive order to close, (iii) a day on which transactions in U.S. dollars are not conducted in the City of New York or (iv) a day on which TARGET2 is not operating.

"***ISDA Definitions***" means the 2006 ISDA Definitions published by the International Swaps and Derivatives Association, Inc. or any successor thereto, as amended or supplemented from time to time, or any successor definitional booklet for interest rate derivatives published from time to time.

"***ISDA Fallback Adjustment***" means the spread adjustment (which may be a positive or negative value or zero) that would apply for derivatives transactions referencing the ISDA Definitions to be determined upon the occurrence of an index cessation event with respect to the Benchmark for the applicable tenor.

"***ISDA Fallback Rate***" means the rate that would apply for derivatives transactions referencing the ISDA Definitions to be effective upon the occurrence of an index cessation date with respect to the Benchmark for the applicable tenor excluding the applicable ISDA Fallback Adjustment.

"***New York Federal Reserve***" means the Federal Reserve Bank of New York.

"***New York Federal Reserve's Website***" means the website of the New York Federal Reserve, currently at http://www.newyorkfed.org, or any successor source.

"***Reference Time***" with respect to any determination of the Benchmark means (1) if the Benchmark is Compounded SOFR based on SOFR Index, the SOFR Index Determination Time, (2) if the Benchmark is Compounded SOFR not based on SOFR Index, or Average SOFR, the SOFR Interest Determination Date, (3) if the Benchmark is Term SOFR, the Reference Time defined in "*– Term SOFR Notes*" above, and (4) if the Benchmark is not any of clauses (1) to (3) here, the time determined by the Bank or its designee in accordance with the Benchmark Replacement Conforming Changes.

"***Relevant Governmental Body***" means the Federal Reserve Board and/or the Federal Reserve Bank of New York, or a committee officially endorsed or convened by the Federal Reserve Board and/or the Federal Reserve Bank of New York or any successor thereto.

"**U.S. Government Securities Business Day**" means any day except for a Saturday, Sunday or a day on which the Securities Industry and Financial Markets Association (or any successor thereto) recommends that the fixed income departments of its members be closed for the entire day for purposes of trading in U.S. government securities.

"***Unadjusted Benchmark Replacement***" means the Benchmark Replacement excluding the Benchmark Replacement Adjustment.

Effect of a Benchmark Transition Event

(a) *Benchmark Replacement*. If the Bank or its designee determines on or prior to the relevant Reference Time that a Benchmark Transition Event and its related Benchmark Replacement Date have occurred with respect to the then-current Benchmark, the Benchmark Replacement will replace the then-current Benchmark for all purposes relating to the SOFR Notes in respect of all determinations on such date and for all determinations on all subsequent dates.

(b) *Benchmark Replacement Conforming Changes*. In connection with the implementation of a Benchmark Replacement, the Bank or its designee will have the right to make Benchmark Replacement Conforming Changes from time to time. No such change shall affect the Trustee's or the Calculation Agent's own rights, duties or immunities under the Indenture or otherwise without their consent.

(c) *Decisions and Determinations*. Any determination, decision or election that may be made by the Bank or its designee pursuant to the benchmark replacement provisions described herein and pursuant to "*—Compounded SOFR*", "— Average SOFR" or "— Term SOFR" above, including any determination with respect to a tenor, rate or adjustment or of the occurrence or non-occurrence of an event, circumstance or date and any decision to take or refrain from taking any action or any selection:

- will be conclusive and binding absent manifest error, provided that neither the Trustee nor the Calculation Agent shall have any responsibility to determine whether any manifest error has occurred and may conclusively assume that no manifest error has occurred and shall suffer no liability in so assuming;
- if made by the Bank, will be made in the Bank's sole discretion;
- if made by the Bank's designee, will be made after consultation with the Bank, and the designee will not make any such determination, decision or election to which the Bank reasonably objects; and

- notwithstanding anything to the contrary in the Indenture or the SOFR Rate Notes, shall become effective without consent from the holders of the SOFR Rate Notes or any other party.

Any determination, decision or election pursuant to the benchmark replacement provisions not made by the Issuer's designee will be made by the Issuer on the basis as described above. The designee shall have no liability for not making any such determination, decision or election. In addition, the Issuer may designate an entity (which may be its affiliate) to make any determination, decision or election that the Issuer has the right to make in connection with the benchmark replacement provisions set forth above. If the Issuer's designee is unable to determine whether a Benchmark Transition Event has occurred and/or has not selected the Benchmark Replacement, then, in such case, the Issuer shall make such determination or select the Benchmark Replacement, as the case may be. If the Benchmark Replacement has not yet been determined as of any Interest Determination Date in accordance with the benchmark replacement provisions and the order set forth in the definition of "Benchmark Replacement", then the interest rate for the next Interest Determination Date will be set equal to the interest rate on the last Interest Determination Date.

(c) Maximum or Minimum Interest Rate

If any Maximum or Minimum Interest Rate is specified in the applicable Supplement, then the Rate of Interest shall in no event be greater than the maximum or be less than the minimum so specified. In addition, the interest rate on Floating Rate Notes will in no event be higher than the maximum rate permitted by New York law, as the same may be modified by United States law of general application.

(d) Accrual of Interest After the Due Date

Interest will cease to accrue as from the due date for redemption therefor unless upon due presentation or surrender thereof (if required), payment in full of the Redemption Amount is improperly withheld or refused or default is otherwise made in the payment thereof. In such event, interest shall continue to accrue on the principal amount in respect of which payment has been improperly withheld or refused or default has been made (as well after as before any demand or judgment) at the Rate of Interest then applicable or such other rate as may be specified for this purpose in the applicable Supplement if permitted by applicable law ("the **Default Rate**") until the date on which, upon due presentation or surrender of the relevant Note (if required), the relevant payment is made or, if earlier (except where presentation or surrender of the relevant Note is not required as a precondition of payment), the seventh day after the date on which, the Trustee having received the funds required to make such payment, notice is given to the holders of the Notes in accordance with the section "*Notices*" below that the Trustee has received the required funds (except to the extent that there is failure in the subsequent payment thereof to the relevant holder).

(e) Interest Amount(s), Calculation Agent and Reference Banks

As soon as practicable after the Relevant Time on each Interest Determination Date (or such other time on such date as the Calculation Agent may be required to calculate any Redemption Amount, obtain any quote or make any determination or calculation) the Calculation Agent will determine the Rate of Interest and calculate the amount(s) of interest payable (the "**Interest Amount(s)**") in the manner specified in (f) below, calculate the Redemption Amount, obtain such quote or make such determination or calculation, as the case may be, and cause the Rate of Interest and the Interest Amounts for each Interest Period and the relevant Interest Payment Date or, as the case may be, the Redemption Amount to be notified to the Trustee and the holders of the relevant Series of Notes in accordance with the section "*Notices*" below as soon as possible after their determination or calculation but in no event later than the fourth Business Day thereafter. The Rate of Interest and Interest Amounts so notified may subsequently be amended (or appropriate alternative arrangements made by way of adjustment) without notice in the event of an extension or shortening of the Interest Period. If the maturity of the Notes of any Series is accelerated, interest will be paid on such Notes through and excluding the related date of accelerated payment. The determination of each Rate of Interest, Interest Amount and Redemption Amount, the obtaining of each quote and the making of each determination or calculation by the Calculation Agent shall (in the absence of manifest error) be final and binding upon holders of the relevant Series of Notes and neither the Calculation Agent nor any Reference Bank shall have any liability to the holders in respect of any determination, calculation, quote or rate made or provided by it.

The Bank will procure that there shall at all times be such Reference Banks as may be required for the purpose of determining the Rate of Interest applicable to the Notes of any relevant Series.

(f) Calculations and Adjustments

The amount of interest payable in respect of any Note for any period shall be calculated by applying the Rate of Interest to the Calculation Amount, and, in each case, multiplying such sum by the Day Count Fraction, save that (i) if the applicable Supplement specifies a specific amount in respect of such period, the amount of interest payable in respect of such Note for such Interest Period will be equal to such specified amount and (ii) in the case of Fixed Rate Notes, the interest shall be calculated on such basis as may be specified in the applicable Supplement.

For the purposes of any calculations referred to herein (unless otherwise specified in the applicable Supplement), (a) all percentages resulting from such calculations will be rounded, if necessary, to the nearest one hundred-thousandth of a percentage point (with 0.000005 per cent. being rounded up to 0.00001 per cent.), (b) all Japanese Yen amounts used in or resulting from such calculations will be rounded downwards to the next lower whole Japanese Yen amount and (c) all amounts denominated in any other currency used in or resulting from such calculations will be rounded to the nearest two decimal places in such currency, with 0.005 being rounded upwards.

If a Benchmark Transition Event and its related Benchmark Replacement Date occur with respect to U.S. dollar LIBOR at any time when U.S. dollar LIBOR Notes are outstanding, then the foregoing provisions under "Interest—Floating Rate Notes" above concerning the calculation and payment of interest on the U.S. dollar LIBOR Notes will be modified in accordance with the benchmark replacement provisions described above under "*Description of the Notes—Interest—Floating Rate Notes—Screen Rate Determination—Benchmark Transition Event for U.S. dollar LIBOR Notes*."

(g) Definitions

Except as otherwise specifically defined in "*Description of the Notes—Interest*" (including in "*—SOFR Rate Notes*" with respect to SOFR Rate Notes), the following terms shall have the meanings indicated below:

"**Banking Day**" means, in respect of any city, a day on which commercial banks are open for general business (including dealings in foreign exchange and foreign currency deposits) in that city.

"**Bloomberg Screen**" means, when used in connection with a designated page and any designated information, the display page so designated on the Bloomberg service (or such other page as may replace that page on that service for the purpose of displaying such information).

"**Business Day**" means (i) in relation to Notes payable in other than euro, a day (other than a Saturday or Sunday) on which commercial banks and foreign exchange markets are open for general business (including dealings in foreign exchange and foreign currency deposits) and settle payments in the relevant currency in the Financial Center(s) specified in the applicable Supplement or (ii) in relation to Notes payable in euro, a day (other than a Saturday or Sunday) which is a TARGET Business Day (as defined below) and on which commercial banks and foreign exchange markets are open for general business (including dealings in foreign exchange and foreign currency deposits) in the Financial Center(s) specified in the applicable Supplement.

"**Business Day Convention**" means a convention for adjusting any date if it would otherwise fall on a day that is not a Business Day and the following Business Day Conventions, where specified in the applicable Supplement in relation to any date applicable to any Notes, shall have the following meanings:

(a) "**Following Business Day Convention**" means that such date shall be postponed to the first following day that is a Business Day;

(b) "**Modified Following Business Day Convention**" or "Modified Business Day Convention" means that such date shall be postponed to the first following day that is a Business Day unless that day falls in the next calendar month in which case that date will be the first preceding day that is a Business Day;

(c) "**Preceding Business Day Convention**" means that such date shall be brought forward to the first preceding day that is a Business Day; and

(d) "**FRN Convention**" or "**Eurodollar Convention**" means that each such date shall be the date which numerically corresponds to the preceding such date in the calendar month which is the number of months

specified in the applicable Supplement after the calendar month in which the preceding such date occurred, provided that:

(i) if there is no such numerically corresponding day in the calendar month in which any such date should occur, then such date will be the last day which is a Business Day in that calendar month;

(ii) if any such date would otherwise fall on a day which is not a Business Day, then such date will be the first following day which is a Business Day unless that day falls in the next calendar month, in which case it will be the first preceding day which is a Business Day; and

(iii) if the preceding such date occurred on the last day in a calendar month which was a Business Day, then all subsequent such dates will be the last day which is a Business Day in the calendar month which is the specified number of months after the calendar month in which the preceding such date occurred.

"**CMS Rate**," as may be used in the applicable Supplement, measures the fixed rate of interest payable on a hypothetical fixed-for-floating U.S. dollar interest rate swap transaction with a maturity of specified years set forth in the applicable Supplement. In such a hypothetical swap transaction, the fixed rate of interest, payable semi-annually on the basis of a 360-day year consisting of twelve 30-day months, is exchangeable for a floating 3-month LIBOR-based payment stream that is payable quarterly on the basis of the actual number of days elapsed during a quarterly period in a 360-day year.

If, on any Interest Determination Date, the CMS Rate is not quoted on the applicable Reuters Screen ISDAFIX3 page, or any page substituted for that page, then the CMS Rate will be a percentage determined on the basis of the mid-market semi-annual swap rate quotations provided by three banks chosen by the Calculation Agent at approximately 11:00 a.m., New York City time, on that 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 the basis of a 360-day year consisting of twelve 30-day months, of a fixed-for-floating U.S. dollar interest rate swap transaction with a term equal to the term of the CMS Rate, commencing on the applicable date and in a representative amount with an acknowledged dealer of good credit in the swap market, where the floating leg, calculated on the actual number of days in a 360-day year, is equivalent to LIBOR, as quoted on the Reuters Screen LIBOR01 page at 11:00 a.m., New York City time, with a designated maturity of three months. The Calculation Agent will request the principal New York City office of each of the three banks chosen by it to provide a quotation of its rate. If at least three quotations are provided, the rate for the relevant Interest Determination Date will be the arithmetic mean of the quotations. If two quotations are provided, the rate for the relevant Interest Determination Date will be the arithmetic mean of the two quotations. If only one quotation is provided, the rate for the relevant Interest Determination Date will equal that one quotation. If no quotations are available, then the CMS Rate will be the rate the Calculation Agent, in its sole discretion, determines to be fair and reasonable under the circumstances at approximately 11:00 a.m., New York City time, on the relevant Interest Determination Date.

Notwithstanding the previous paragraph, with respect to Floating Rate Notes linked to the CMS Rate, if (i) on any Interest Determination Date, the CMS Rate is not quoted on the applicable Reuters Screen ISDAFIX3 page, or any page substituted for that page, and (ii) the Issuer or its designee determines, on or prior to such Interest Determination Date, that a Benchmark Transition Event and its related Benchmark Replacement Date (each as defined above under "— Benchmark Transition Event for U.S. dollar LIBOR Notes") have occurred with respect to U.S. dollar LIBOR, then the floating leg of the CMS Rate will thereafter be calculated under the provisions set forth above under "— Benchmark Transition Event for U.S. dollar LIBOR Notes — Effect of a Benchmark Transition Event for U.S. dollar LIBOR Notes."

"**Day Count Fraction**" means, in respect of the calculation of an amount for any period of time (each such period an "**Accrual Period**"), such day count fraction as may be specified in the applicable Supplement and:

(a) if "**Actual/Actual**" or "**Actual/Actual (ISDA)**" is so specified, means the actual number of days in the Accrual Period divided by 365 (or, if any portion of the Accrual Period falls in a leap year, the sum of (A) the actual number of days in that portion of the Accrual Period falling in a leap year divided by 366 and (B) the actual number of days in that portion of the Accrual Period falling in a non-leap year divided by 365);

(b) if "**Actual/365 (Fixed)**" is so specified, means the actual number of days in the Accrual Period divided by 365;

(c) if "**Actual/360**" is so specified, means the actual number of days in the Accrual Period divided by 360;

(d) if "**30E/360**" or "**Eurobond Basis**" is specified in the applicable Supplement, the number of days in the Interest Period divided by 360, calculated on a formula basis as follows:

$$\text{Day Count Fraction} = \frac{[360 \times (Y2 - Y1)] + [30 \times (M2 - M1)] + (D2 - D1)}{360}$$

where:

"Y1" is the year, expressed as a number, in which the first day of the Interest Period falls;

"Y2" is the year, expressed as a number, in which the day immediately following the last day included in the Interest Period falls;

"M1" is the calendar month, expressed as a number, in which the first day of the Interest Period falls;

"M2" is the calendar month, expressed as a number, in which the day immediately following the last day included in the Interest Period falls;

"D1" is the first calendar day, expressed as a number, of the Interest Period, unless such number would be 31, in which case D1 will be 30; and

"D2" is the calendar day, expressed as a number, immediately following the last day included in the Interest Period, unless such number would be 31, in which case D2, will be 30.

(e) if "**30/360**," "**360/360**" or "**Bond Basis**" is specified in the applicable Supplement, the number of days in the Interest Period divided by 360, calculated on a formula basis as follows:

$$\text{Day Count Fraction} = \frac{[360 \times (Y2 - Y1)] + [30 \times (M2 - M1)] + (D2 - D1)}{360}$$

where:

"Y1" is the year, expressed as a number, in which the first day of the Interest Period falls;

"Y2" is the year, expressed as a number, in which the day immediately following the last day included in the Interest Period falls;

"M1" is the calendar month, expressed as a number, in which the first day of the Interest Period falls;

"M2" is the calendar month, expressed as number, in which the day immediately following the last day included in the Interest Period falls;

"D1" is the first calendar day, expressed as a number, of the Interest Period, unless such number would be 31, in which case D1 will be 30; and

"D2" is the calendar day, expressed as a number, immediately following the last day included in the Interest Period, unless such number would be 31 and D1 is greater than 29, in which case D2 will be 30;

(f) if "**30E/360 (ISDA)**" is so specified, means the number of days in the Accrual Period divided by 360, calculated on a formula basis as follows:

$$\text{Day Count Fraction} = \frac{[360 \times (Y2 - Y1)] + [30 \times (M2 - M1)] + (D2 - D1)}{}$$

360

where:

"Y1" is the year, expressed as a number, in which the first day of the Accrual Period falls;

"Y2" is the year, expressed as a number, in which the day immediately following the last day included the Accrual Period falls;

"M1" is the calendar month, expressed as a number, in which the first day of the Accrual Period falls;

"M2" is the calendar month, expressed as a number, in which the day immediately following the last day included in the Accrual Period falls;

"D1" is the first calendar day, expressed as a number, of the Accrual Period, unless (i) that day is the last day of February or (ii) such number would be 31, in which case D1 will be 30; and

"D2" is the calendar day, expressed as a number, immediately following the last day included in the Accrual Period, unless (i) that day is the last day of February but not the stated maturity date or (ii) such number would be 31, in which case D2 will be 30; and

(g) if "**Actual/Actual (ICMA)**" or "**Act/Act (ICMA)**" is specified in the applicable Supplement, a fraction equal to "number of days accrued/number of days in year," as such terms are used in Rule 251 of the statutes, by-laws, rules and recommendations of the International Capital Market Association (the "**ICMA Rule Book**"), calculated in accordance with Rule 251 of the ICMA Rule Book as applied to non U.S. dollar denominated straight and convertible bonds issued after December 31, 1998, as though the interest coupon on a bond were being calculated for a coupon period corresponding to the Interest Period.

"**Determination Date**" means such dates as specified in the applicable Supplement.

"**Determination Period**" means the period from and including a Determination Date in any year to but excluding the next Determination Date (including, where either the Interest Commencement Date or the final Interest Payment Date is not a Determination Date, the period commencing on the first Determination Date prior to, and ending on the first Determination Date falling after, such date).

"**Financial Center**" means such financial center or centers as may be specified in relation to the relevant currency for the purposes of the definition of "Business Day" in the ISDA Definitions or indicated in the applicable Supplement or, in the case of Notes denominated in euro, such financial center or centers as the Calculation Agent may select.

"**Interest Commencement Date**" means the date of issue (the "**Issue Date**") of the Notes (as specified in the applicable Supplement) or such other date as may be specified as such in the applicable Supplement.

"**Interest Determination Date**" means, in respect of any Interest Period, the date falling such number (if any) of Banking Days in such city or cities as may be specified in the applicable Supplement prior to the first day of such Interest Accrual Period, or if none is specified:

(a) in the case of Notes denominated in Pounds Sterling or in another currency if so specified in the applicable Supplement, the first day of such Interest Period; or

(b) in any other case, the date falling two London Banking Days prior to the first day of such Interest Accrual Period.

"**Interest Payment Date**" means the date or dates specified as such in, or determined in accordance with the provisions of, the applicable Supplement, as the same may be adjusted in accordance with the Business Day Convention, if any, specified in the applicable Supplement or if the Business Day Convention is the FRN Convention and an interval of a number of calendar months is specified in the applicable Supplement as being the Interest Period, each of such dates as may occur in accordance with the FRN Convention at such specified period of calendar months

following the Issue Date of the Notes (in the case of the first Interest Payment Date) or the previous Interest Payment Date (in any other case).

"**Interest Period**" means each successive period beginning on and including an Interest Payment Date and ending on but excluding the next succeeding Interest Payment Date, provided always that the first Interest Period shall commence on and include the Interest Commencement Date and the final Interest Period shall end on but exclude the stated maturity.

"**Interest Period End Date**" means the date or dates specified as such in, or determined in accordance with the provisions of, the applicable Supplement, as the same may be adjusted in accordance with the Business Day Convention, if any, specified in the applicable Supplement or, if the Business Day Convention is the FRN Convention and an interval of a number of calendar months is specified in the applicable Supplement as the Interest Accrual Period, such dates as may occur in accordance with the FRN Convention at such specified period of calendar months following the Interest Commencement Date (in the case of the first Interest Period End Date) or the previous Interest Period End Date (in any other case) or, if none of the foregoing is specified in the applicable Supplement, means the date or each of the dates which correspond with the Interest Payment Date(s) in respect of the Notes.

"**ISDA Definitions**" means the 2006 ISDA Definitions (as amended, supplemented and updated as at the date of issue of the Notes of the relevant Series (as specified in the applicable Supplement) as published by ISDA) unless otherwise specified in the applicable Supplement.

"**Rate of Interest**" means the rate or rates (expressed as a percentage per annum) or amount or amounts (expressed as a price per unit of relevant currency) of interest payable in respect of the Notes specified in, or calculated or determined in accordance with the provisions of, the applicable Supplement.

"**Reference Banks**" means such banks as may be specified in the applicable Supplement as the Reference Banks, or, if none are specified, "Reference Banks" has the meaning given in the ISDA Definitions, mutatis mutandis.

"**Relevant Time**" means the time as of which any rate is to be determined as specified in the applicable Supplement (which in the case of LIBOR means London time) or, if none is specified, at which it is customary to determine such rate.

"**Reuters Screen**" means, when used in connection with a designated page and any designated information, the display page so designated on the Reuters Market 3000 (or such other page as may replace that page on that service for the purpose of displaying such information).

"Reuters Screen Page" means the Reuters Screen as specified in the applicable Supplement or, if none is specified, what is determined by the Calculation Agent to be customary for such rate.

"**Screen Rate Determination**" means determination of the interest rate for Floating Rate Notes by reference to the relevant screen page for the applicable reference rate, as specified in the applicable Supplement.

"**TARGET Business Day**" means, a day in which the Trans-European Automated Real-Time Gross Settlement Express Transfer (TARGET) System is open.

Payments of Additional Amounts

All payments in respect of the Notes shall be made free and clear of, and without withholding or deduction for or on account of, any present or future taxes, duties, assessments or governmental charges of whatever nature imposed, levied, collected, withheld or assessed unless such withholding or deduction is required by law.

In the event that any amounts are required to be deducted or withheld for, or on behalf of, Canada or any province or territory thereof, the Bank shall pay such additional amount as may be necessary, in order that each holder of a Note, after deduction or withholding of such taxes, duties, assessments or governmental charges, will receive the full amount then due and payable that would have been received by such holder had no deduction or withholding been required, provided that no such additional amounts shall be payable with respect to any Note:

(a) held by or on behalf of a holder who is liable to such taxes, duties, assessments or governmental charges in respect of such Note by reason of his being connected with Canada or any province or territory thereof other than by the mere holding of such Note; or

(b) to, or to a third party on behalf of, a holder in respect of whom such tax, duty, assessment or governmental charge is required to be withheld or deducted by reason of the holder or any other person entitled to payments under the Notes being a person with whom the Bank is not dealing at arm's length (within the meaning of the Income Tax Act (Canada)), or being a person who is, or does not deal at arm's length with any person who is a "specified shareholder" of the Bank for the purposes of the thin capitalization rules in the *Income Tax Act* (Canada); or

(c) presented for payment more than 30 days after the date on which the payment in respect of the Notes first became due and payable or the date on which payment thereof is duly provided for, whichever occurs later, except to the extent that the holder thereof would have been entitled to such additional amount on presenting the same for payment on the thirtieth such day; or

(d) if such tax or governmental charge is on account of an estate, inheritance, gift, sale, transfer, personal property or similar tax or governmental charge; or

(e) to, or to a third party on behalf of, a holder who is liable for such taxes, duties, assessments or other governmental charges by reason of such holder's failure to comply with any certification, identification, documentation or other reporting requirement concerning the nationality, residence, identity or connection with Canada or any province or territory thereof, if (i) compliance is required by law as a precondition to, exemption from, or reduction in the rate of, the tax, duty, assessment or other governmental charge and (ii) the Bank has given holders at least 30 days' notice that holders will be required to provide such certification, identification, documentation or other requirement;

(f) to a holder who is a fiduciary or partnership or other than the sole beneficial owner of such payment to the extent a beneficiary or settlor with respect to such fiduciary or a member of such partnership or beneficial owner would not have been entitled to the additional amounts had such beneficiary, settler, member or beneficial owner held its interest in the Note directly;

(g) for any withholding or deduction imposed or levied pursuant to an agreement described in Section 1471(b) of the U.S. Internal Revenue Code of 1986, as amended (the "**Code**") or otherwise imposed pursuant to Sections 1471 through 1474 of the Code and any regulations or agreements thereunder, official interpretations thereof, or law implementing an intergovernmental approach thereto; or

(h) if such tax, duty, assessment or governmental charge is in respect of any amount that is "participating debt interest" (within the meaning of the *Income Tax Act* (Canada)).

At least 30 days prior to each date on which any payment under or with respect to the Notes is due and payable (unless such obligation to pay additional amounts arises after the 30th day prior to the date on which payment under or with respect to the Notes is due and payable, in which case it will be promptly thereafter), if the Bank will be obligated to pay additional amounts with respect to such payment, the Bank will deliver to the Trustee an officer's certificate stating that such additional amounts will be payable and the amounts so payable and setting forth such other information as is necessary to enable the Trustee to pay such additional amounts to the holders of such Notes on the payment date.

Redemption and Repurchase

(a) Redemption at Maturity

Unless previously redeemed, or repurchased and cancelled, each Note shall be redeemed at the amount specified in the applicable Supplement in the Specified Currency on the Final Maturity Date (the "**Final Redemption Amount**").

(b) Optional Early Redemption by the Bank

Unless otherwise indicated in the applicable Supplement, the Notes will not be redeemable prior to their stated maturity date. If so provided for in the applicable Supplement, the Bank may, having given not less than 10 nor more than 45 days' notice to the holders of Notes (with a copy to the Trustee) in accordance with "*Notices*" below, which notices shall be irrevocable and shall specify the date fixed for redemption, redeem the Notes then outstanding, in whole or in part, on any optional redemption date and at the optional redemption amounts specified in, or determined in the manner specified in, the applicable Supplement together, if appropriate, with interest accrued to, but excluding, the relevant optional redemption date. Any such redemption must be of a nominal amount equal to the minimum redemption amount or a higher redemption amount, in each case as specified in the applicable Supplement.

In the case of a partial redemption of Notes, the Notes to be redeemed ("**Redeemed Notes**") will be selected individually by lot, pro rata or such other method as the Trustee shall deem fair and appropriate, in the case of Redeemed Notes represented by certificated Notes, and in accordance with the rules of the Depository in the case of Redeemed Notes represented by a Global Note, not more than 30 days prior to the date fixed for redemption (such date of selection the "**Selection Date**"). In the case of Redeemed Notes represented by certificated Notes, a list of the serial numbers of such Redeemed Notes will be published in accordance with "*Notices*" below, not less than 15 days prior to the date fixed for redemption. No exchange of the relevant Global Note will be permitted during the period from and including the Selection Date to and including the date fixed for redemption pursuant to this section and notice to that effect shall be given by the Bank to the holders of Notes in accordance with "*Notices*" below, at least ten days prior to the Selection Date.

In respect of any Note, any notice given by the Bank pursuant to this clause shall be void and of no effect in relation to that Note in the event that, prior to the giving of such notice by the Bank, the holder of such Note had already delivered a Put Notice in relation to that Note in accordance with the provisions of "*— Optional Early Redemption by Holder*" below.

Additional information regarding an optional early redemption by the Bank with respect to a Series of Notes will be set forth in the related Supplement.

(c) Optional Early Redemption by Holder

Unless otherwise specified in the applicable Supplement, the Notes will not be redeemable by the holder(s) prior to their stated maturity date. If so provided for in the applicable Supplement for Notes of any offering in any Series, the applicable Supplement for such Notes will indicate that upon the holder of any Note giving to the Bank in accordance with "*Notices*" below not less than 15 nor more than 30 days' notice, the Bank will, upon the expiration of such notice, redeem, subject to and in accordance with the terms specified in the applicable Supplement, in whole, but not in part, such Note on the optional redemption date and at the optional redemption amount together, if appropriate, with interest accrued to but excluding the optional redemption date.

If a Note is in certificated form and held outside the Depository, to exercise the right to require redemption of such Note, the holder of such Note must deliver such Note at the specified office of the Trustee at any time during normal business hours of such Trustee falling within the notice period, a duly completed and signed notice of exercise in the form obtainable from any specified office of the Trustee (a "**Put Notice**") and in which the holder must specify a bank account, or, if payment is required to be made by check, an address, to which payment is to be made under this clause, accompanied by the Note or evidence satisfactory to the Trustee concerned that the Note will, following delivery of the Put Notice, be held to its order or under its control. If the Note is represented by a Global Note or is in certificated form and held through a Depository, to exercise the right to require redemption of such Note, the holder of the Note must, within the notice period, give notice to the Trustee of such exercise in accordance with the standard procedures of the Depository, which may include notice being given on his instruction by a Depository or any nominee for them to the Trustee by electronic means, in a form acceptable to the Depository from time to time and, if a Note is represented by a Global Note, at the same time present or procure the presentation of the relevant Global Note to the Trustee for notation accordingly.

Any Put Notice given by a holder of any Note pursuant to this paragraph shall be (i) irrevocable except if prior to the due date of redemption an Event of Default shall have occurred and be continuing, in which event such holder, at his option, may elect by notice to the Bank to withdraw the notice given pursuant to this paragraph and instead to declare such Note forthwith due and payable or deliverable pursuant to the provisions of "*— Events of*

Default" and (ii) void and of no effect in relation to such Note in the event that, prior to the giving of such Put Notice by the relevant holder (A) such Note constituted a Redeemed Note, or (B) the Bank had notified the Noteholders of its intention to redeem all of the Notes in a Series then outstanding, in each case pursuant to "— *Optional Early Redemption by the Bank*" above.

(d) Special Requirements for Optional Redemption of Global Notes

If Notes of any offering in any series are represented by a Global Note, the Depository or the Depository's nominee will be the holder of the Global Note and therefore will be the only entity that can exercise a right to redemption, if applicable. In order to ensure that the Depository's nominee will timely exercise a right to redemption of a particular Global Note, as provided in "— *Optional Early Redemption by Holder*" above, the beneficial owner of the Notes represented by such Global Note must instruct the broker or other Direct or Indirect Participant through which it holds an interest in the Global Note to notify the Depository of its desire to exercise a right to repayment. Different firms have different cut-off times for accepting instructions from their customers and, accordingly, each Beneficial Owner should consult the broker or other Direct or Indirect Participant through which it holds an interest in a Global Note in order to ascertain the cut-off time by which an instruction must be given in order for timely notice to be delivered to the Depository.

(e) Mandatory Early Redemption

Unless otherwise indicated in the applicable Supplement, the Notes will not be subject to mandatory redemption prior to maturity. If so provided in the applicable Supplement for Notes of any offering in any Series, such Notes will be redeemable, in whole and not in part, on mandatory early redemption dates prior to their specified maturity date or upon the occurrence of certain events in such manner as specified in the applicable Supplement. The applicable Supplement will also provide the applicable mandatory Redemption Amount, which may be fixed at the time of sale of such Notes, or the method of calculating the payment amount for which such Notes will be redeemed.

(f) Redemption for Taxation Reasons

The Bank will have the right to redeem the Notes in whole, but not in part, at any time (in the case of Notes other than Floating Rate Notes) or on any Interest Payment Date (in the case of Floating Rate Notes), following our determination that a Tax Event (as defined herein) has occurred that would require us to pay additional amounts on the Notes of any Series pursuant to "*Payments of Additional Amounts*" above, unless at the time there is available to us the opportunity to eliminate the Tax Event by taking some ministerial action, such as filing a form or making an election, or pursuing some other similar reasonable measure that in our sole judgment has or will cause no adverse effect on us or any of our subsidiaries or affiliates and will involve no material cost, in which event we will pursue that measure in lieu of redemption.

If the Bank's redemption right arises under such circumstances, the Bank may, by giving to the holders of the Notes not more than 60 nor less than 30 days' notice in accordance with "*Notices*" below, which notices shall be irrevocable and shall specify the date fixed for redemption, redeem all, but not some only, of the Notes. The Bank shall give each such notice to the Trustee in writing at least 15 days before the date such notice is mailed to each Holder of the Notes, unless the Trustee consents to a shorter period. If the Bank redeems the Notes in these circumstances, the redemption price of each Note will be equal to 100% of the principal amount of such Note plus accrued but unpaid interest on such Note to the date of redemption.

"**Tax Event**" means that there has been:

- an amendment to or change in the laws or regulations of Canada or any province or territory thereof;
- a judicial decision interpreting, applying or clarifying those laws or regulations; or
- an administrative pronouncement or action that represents an official position, including a clarification of an official position, of the governmental authority or regulatory body making the administrative pronouncement or taking any action,

which amendment or change is adopted or which proposed change, decision, pronouncement or action is announced or which action or clarification occurs on or after the issue date of the Notes or, in the event that the Bank has

amalgamated merged, consolidated or sold substantially all of its assets after such date, the most recent effective date of such merger, consolidation or asset sale, following which any payment on the Notes is, or will be, subject to withholding or deduction in respect of any taxes, assessments or other governmental charges that did not apply prior to such amendment, change, proposed change, decision, pronouncement or action.

(g) TLAC Disqualification Event Redemption

If a TLAC Disqualification Event (as defined herein) is specified in the applicable Pricing Supplement, we may, at our option, with the prior approval of the Superintendent of Financial Institutions, redeem all but not less than all of the particular Bail-inable Notes prior to their stated maturity date after the occurrence of the TLAC Disqualification Event at the time and at the redemption price or prices specified in that Pricing Supplement, together with unpaid interest accrued thereon to, but excluding, the date fixed for redemption.

A "**TLAC Disqualification Event"** means OSFI has advised the Bank in writing that the Bail-inable Notes will no longer be recognized in full as TLAC under the TLAC Guideline as interpreted by the Superintendent of Financial Institutions, provided that a TLAC Disqualification Event will not occur where the exclusion of the Bail-inable Notes from the Bank's TLAC requirements is due to the remaining maturity of the Bail-inable Notes being less than any period prescribed by any relevant eligibility criteria applicable as of the issue date of the Bail-inable Notes.

(h) Approval of Redemption, Repurchases and Defeasance; Amendments and Modifications

Where the redemption, repurchase or any defeasance or covenant defeasance with respect to Bail-inable Notes would result in the Bank not meeting the TLAC requirements applicable to it pursuant to the TLAC Guideline or is made as a result of a TLAC Disqualification Event, that redemption, repurchase, defeasance or covenant defeasance will be subject to the prior approval of the Superintendent of Financial Institutions.

Where an amendment, modification or other variance that can be made to the Indenture or the Bail-inable Notes would affect the recognition of those Bail-inable Notes by the Superintendent of Financial Institutions as TLAC, that amendment, modification or variance will require the prior approval of the Superintendent of Financial Institutions.

(i) Illegality

In the event that the Bank determines in good faith that (i) the performance of the Bank's obligations under the Notes or (ii) any arrangements made to hedge the Bank's obligations under the Notes has or will become, in whole or in part, unlawful, illegal or otherwise contrary to any present or future law, rule, regulation, judgment, order or directive of any governmental, administrative, legislative, judicial or regulatory authority or powers, or any change in the interpretation thereof that is applicable to the Bank, it may, at its discretion, by giving, at any time, not less than 10 nor more than 30 calendar days' notice to Noteholders (which notice shall be revocable at the Bank's option), elect that such Notes be redeemed, in whole but not in part, on the date specified by the Bank, at their principal amount together, if applicable, with interest accrued to (but excluding) the date fixed for redemption.

(j) Repurchases

The Bank or its affiliates may purchase the Notes at any price in the open market or otherwise. Notes so purchased by the Bank may, at its discretion, be held or resold or surrendered to the Trustee for cancellation.

Exchange and Replacement of Notes

The following description concerning the transfer, exchange and replacement of Notes will only apply to physical notes issued to the holders or to Notes evidenced by Global Notes in the event that the use of DTC's book-entry system is discontinued pursuant to the terms of the Indenture and such Notes are delivered in definitive form to the owners thereof.

The Notes may be transferred or exchanged for Notes of a like aggregate principal amount in any authorized denominations and otherwise of the same terms as such Notes so transferred or exchanged. The transfer of any Notes may be registered only upon the Register and only upon surrender of such Notes to the Trustee. Each Note surrendered for registration of transfer or for exchange shall (if so required by the Trustee or the Bank) be duly endorsed, or be accompanied by a written instrument of transfer with such evidence of due authorization and guarantee of signature

as may reasonably be required by the Trustee or the Bank in form satisfactory to the Trustee or the Bank, duly executed by the holder thereof or his attorney duly authorized in writing. In the event any Note becomes mutilated, destroyed, stolen or lost, the Trustee shall authenticate and deliver a replacement Note of like tenor and principal amount in exchange or replacement therefor in accordance with the provisions therefor in the Indenture.

The manner of transferring ownership interests in Global Notes while such Notes are in DTC's book-entry system is described below under "*Book-Entry Clearing Systems.*"

Merger and Similar Events

The Indenture provides that the Bank will not amalgamate with, consolidate with or merge with or into any other Person (defined in the Indenture to mean any individual, partnership, corporation, business trust, joint stock company, limited liability company, trust, unincorporated association, joint venture, governmental entity or other entity of whatever nature) or sell, lease or convey all or substantially all of its assets to any other Person, unless (i) either the Bank shall be the continuing entity, or the successor entity or the Person which acquires by sale, lease or conveyance substantially all the assets of the Bank (if other than the Bank) shall be an entity organized under the laws of Canada or any province thereof or the laws of the United States of America or any State thereof or the District of Columbia and shall expressly assume the due and punctual payment of the Redemption Amount of and interest on all the Notes according to their tenor, and the due and punctual performance and observance of all of the covenants and conditions of the Indenture to be performed or observed by the Bank, by supplemental indenture in form satisfactory to the Trustee, executed and delivered to the Trustee by such entity, and (ii) the Bank, such Person or such successor entity, as the case may be, shall not, immediately after such amalgamation, merger or consolidation, or such sale, lease or conveyance, be in default in the performance of any such covenant or condition. The Indenture further provides that upon any amalgamation, consolidation, merger or transfer of all or substantially all of the assets of the Bank, the Person formed by or surviving such consolidation or merger (if other than the Bank), or the Person to which such amalgamation, consolidation, merger or transfer is made, shall succeed to, and be substituted for, and may exercise every right and power of the Bank under the Indenture with the same effect as if such Person had been named as the Bank therein.

If the conditions described above are satisfied, the Bank will not need to obtain the approval of the holders of the Notes in order to amalgamate, merge or consolidate or to sell its assets. Also, these conditions will apply only if the Bank wishes to amalgamate, merge or consolidate with another entity or sell substantially all of its assets to another entity. The Bank will not need to satisfy these conditions if the Bank enters into other types of transactions, including any transaction in which the Bank acquires the stock or assets of another entity, any transaction that involves a change of control, but in which the Bank does not amalgamate, merge or consolidate and any transaction in which the Bank sells less than substantially all of its assets. It is possible that this type of transaction may result in a reduction in the Bank's credit ratings, may negatively affect its operating results or may impair its financial condition. Holders of Notes, however, will have no approval right with respect to any transaction of this type.

Events of Default and Remedies; Waiver of Past Defaults

Events of Default and Remedies

Under the Indenture, for Notes of a Series issued on or after the date of the First Supplemental Indenture, an "**Event of Default**" means any of the following:

- We default in the payment of the principal of, or interest on, any Note of that Series and, in each case, the default continues for a period of 30 business days;
- Certain bankruptcy, insolvency or reorganization events occur in Canada with respect to the Bank as issuer; or
- Any other Event of Default provided with respect to Notes of that Series.

An Event of Default regarding one series of debt securities will not cause an Event of Default regarding any other series of debt securities. For purposes of this section "*— Events of Default and Remedies*," with respect to debt securities issued on or after the date of the First Supplemental Indenture, "series" refers to debt securities having

identical terms, except as to issue date, principal amount and, if applicable, the date from which interest begins to accrue. A Bail-in Conversion will not constitute a default or an Event of Default under the Indenture.

Under the Indenture, upon the occurrence and continuance of an Event of Default with respect to any Series of Notes, unless the Redemption Amount for such Series has already become due and payable, either the Trustee or the holders of at least a majority in aggregate principal amount of the Notes of such Series by notice in writing to the Bank (and to the Trustee if given by the holders of the Notes), may declare the entire Redemption Amount of all Notes then outstanding and interest accrued thereon (if any), or any other amounts payable, to be due and payable, and upon any such declaration, the same shall become immediately due and payable.

The Indenture provides that if an Event of Default occurs with respect to any Series of Notes, has not been waived and is continuing, the Trustee may in its discretion, and at the direction of the holders of at least a majority of the outstanding aggregate principal amount of such Series of Notes will, proceed to protect and enforce its rights and the rights of the holders of such Notes by such appropriate judicial proceedings as the Trustee shall deem most effectual to protect and enforce any such rights, whether for the specific enforcement of any covenant or agreement in the Indenture or in aid of the exercise of any power granted in the Indenture, or to enforce any other proper remedy. Any money collected by the Trustee upon exercise of the remedies under the Indenture or, after an Event of Default, any money or other property distributable in respect of the Bank's obligations under the Indenture, will be applied first, to the payment of any costs and expenses of the Trustee incurred in the enforcement of the affected Notes, second, to payment of the Redemption Amount (if any), interest (if any) or other amounts payable on the outstanding affected Notes and third, to payment of the remainder, if any, to the Bank or any other Person lawfully entitled thereto.

The Indenture further provides that if an Event of Default under the Indenture shall have occurred and be continuing, the Trustee shall, within 30 calendar days after a responsible officer of the Trustee obtains written notice of the occurrence of such Event of Default, give notice of such Event of Default to the Bank, as well as to the holders of the Notes of each Series, in the manner provided in the Indenture; provided, however, that notwithstanding the foregoing, except in the case of a default by the Bank in the payment of the Redemption Amount (if any), interest (if any) or other amounts payable on the Notes at maturity (whether at the stated maturity or by declaration of acceleration, call for redemption at our option or otherwise), the Trustee shall not be required to give such notice to the holder of the Notes of any Series if the Trustee in good faith shall have decided that the default is not materially prejudicial to the holders of the Notes of such Series and shall have so advised the Bank in writing. Where a notice of the occurrence of an Event of Default has been given to the holders of the Notes of any Series pursuant to the Indenture provision described in the preceding sentence and the Event of Default is thereafter cured, the Trustee shall give notice that the Event of Default is no longer continuing to the holders of the affected Notes within 30 calendar days after it becomes aware that the Event of Default has been cured.

Holders or beneficial owners of Bail-inable Notes may only exercise, or direct the exercise of, the rights described in this section if the Governor in Council (Canada) has not made an order under Canadian bank resolution powers pursuant to subsection 39.13(1) of the CDIC Act in respect of the Bank. Notwithstanding the exercise of those rights, Bail-inable Notes will continue to be subject to Bail-in Conversion until repaid in full.

By its acquisition of an interest in any Bail-inable Note, each holder or beneficial owner of that Note, is deemed to waive any and all claims, in law and/or in equity, against the Trustee, for, agrees not to initiate a suit against the Trustee in respect of, and agrees that the Trustee will not be liable for, any action that the Trustee takes, or abstains from taking, in either case in accordance with the Bail-in Regime.

Waiver of Past Defaults

The Indenture provides that, with respect to any Series of Notes, the Trustee may, and at the direction of the holders of at least a majority of the aggregate principal amount of the Notes of each applicable Series (voting as a single class), on behalf of the holders of the Notes of such Series, waive any past event which is, or after notice or passage of time or both would be, an Event of Default (a "**Default**") and its consequences, except a Default in the payment of the Redemption Amount, interest or any other amounts (unless such Default has been cured and a sum (in cash or Notes) sufficient to pay such amounts has been deposited with the Trustee) or a Default in respect of a provision of the Indenture which pursuant to the terms thereof cannot be modified or amended without the consent of each holder of the Notes of the affected Series as is specified below in "*— Modifications of Indenture and the Terms of the Notes and the Guarantee; Supplemental Indentures.*"

Discharge

The Indenture will cease to be of further effect with respect to the Notes of any Series, except as to rights of registration of transfer and exchange, substitution of mutilated or defaced Notes, rights of holders to receive Redemption Amount, interest or other amounts payable under the Notes, rights and immunities of the Trustee and rights of holders with respect to property deposited pursuant to the following provisions, if at any time:

- the Bank has paid the Redemption Amount, interest or other amounts payable under the Notes of such Series;
- the Bank has delivered all Notes to the Trustee for cancellation of such Series; or
- where the Notes of such Series have become due and payable but have not been delivered to the Trustee for cancellation, or the Notes are by their terms to become due and payable within one year or are to be called for redemption within one year under arrangements satisfactory to the Trustee for the giving of notice of redemption, the Bank has irrevocably deposited or caused to be deposited with the Trustee as trust funds the entire amount to pay all of the amounts payable on Notes of such Series on each date that amounts are due and payable.

The Trustee, on demand of the Bank accompanied by an officers' certificate and an opinion of counsel and at the cost and expense of Bank, will execute proper instruments acknowledging such satisfaction of and discharging the Indenture.

All Notes that are redeemed or purchased for cancellation by the Bank may forthwith be cancelled and accordingly may not be re-issued or resold and the obligations of the Bank in respect of any such Notes shall be discharged.

Any defeasance or covenant defeasance with respect to Bail-inable Notes that would result in the Bank not meeting the TLAC requirements applicable to it pursuant to the TLAC Guideline will be subject to the prior approval of the Superintendent of Financial Institutions.

Modifications of Indenture and the Terms of the Notes and the Guarantee; Supplemental Indentures

With respect to each Series of Notes, the Bank and the Trustee may, with the consent of the holders of not less than a majority in aggregate principal amount of the Notes of such Series, modify and amend the provisions of such Notes, including to grant waivers of future compliance or past default by the Bank. However, no such amendment or modification will apply to Notes of such Series without the consent of each holder affected thereby with respect to the following matters:

(a) change the stated maturity date of, the Redemption Amount of, or of any installment of Redemption Amount of or interest on, any Note;

(b) reduce the Redemption Amount of, interest on, or any other amounts due under the Notes;

(c) change the currency or currency unit of payment of the Notes;

(d) change the method by which amounts of payment of Redemption Amount, interest or other amounts are determined on the Notes;

(e) impair the right of a holder to institute suit for the payment of or, if the Notes provide, any right of repayment at the option of the holder of the Notes;

(f) change the status of the Notes so as to subordinate principal or interest thereon;

(g) change the place of payments on the Notes; or

(h) reduce the percentage of Notes of any Series, the consent of the holders of which is required for any modification.

The Indenture also permits the Bank and the Trustee to amend the Indenture in certain circumstances without the consent of the holders of the Notes of any Series to evidence our merger, to replace the Trustee, and for certain other purposes. In addition, no consent of the holders of the Notes is or will be required for any modification, amendment or supplement requested by the Bank to:

- provide security or collateral for the Notes;
- evidence any merger or succession of another entity to the Bank;
- add to the Bank's covenants for the benefit of the holders;
- cure any ambiguity in any provision, or correct any defective provision, of any Series of Notes;
- change the terms and conditions of the Notes of any Series or the Indenture in any manner which shall be necessary or desirable so long as any such change does not, and will not, in the sole opinion of the Bank, adversely affect the rights or interest of any holder of such Series;
- modify the restrictions on, and procedures for, resale and other transfers of the Notes of any Series pursuant to law, regulations or practice relating to the resale or transfer of restricted securities generally;
- evidence the acceptance of appointment of a successor to any agent; or
- establish a new Series of Notes or additional Notes.

The Bank may at any time ask for written consent or call a meeting of the holders of the Notes of a Series to seek their approval of the modification of or amendment to, or obtain a waiver of, any provision of the Notes of such Series. This meeting will be held at the time and place determined by the Bank and specified in a notice of such meeting furnished to the holders of the relevant Series of Notes, which notice must be given at least 30 days and not more than 60 days prior to such meeting.

If at any time the holders of at least 10% in aggregate principal amount of the Notes of any Series request the Trustee to call a meeting of the holders of the Notes of such Series for any purpose, by written request setting forth in reasonable detail the action proposed to be taken at the meeting, the Trustee will call the meeting for such purpose. This meeting will be held at the time and place determined by the Trustee and specified in a notice of such meeting furnished to the holders of the Notes of such Series. This notice must be given at least 30 days and not more than 60 days prior to such meeting.

Holders who hold a majority in aggregate principal amount of the Notes of the relevant Series will constitute a quorum at a meeting of the holders of such Notes. In the absence of a quorum, a meeting may be adjourned for a period of at least 20 days and not more than 45 days. At the reconvening of a meeting adjourned for lack of quorum, there shall be no quorum required. Notice of the reconvening of any meeting may be given only once, but must be given at least ten days and not more than 15 days prior to such meeting.

At any meeting that is duly convened, holders of at least a majority in aggregate principal amount of the Notes of the relevant Series represented and voting at the meeting whether in person or by proxy thereunto duly authorized in writing, and, in absence of a meeting, holders holding at least a majority in aggregate principal amount of such Notes and providing written consents, may approve the modification or amendment of, or a waiver of compliance for, any provision of the Notes except for specified matters requiring the consent of each holder, as set forth above. Modifications, amendments or waivers made at such a meeting will be binding on all current and future holders of such Notes.

Where an amendment, modification or other variance that can be made to the Indenture would affect the recognition of any Bail-Inable Notes by the Superintendent of Financial Institutions as TLAC, that amendment, modification or variance will require the prior approval of the Superintendent of Financial Institutions.

Trustee, Paying Agent and Authenticating Agent

The Indenture contains provisions regarding the appointment and removal of the Trustee, the Paying Agent and an Authenticating Agent. The Indenture provides that the Trustee may at any time resign and be discharged of its

responsibilities under the Indenture and of its responsibilities created by the Notes upon 60 days' prior written notice to the Bank and that the Bank may remove the Trustee at any time, for such good and reasonable cause as shall be determined in its sole discretion. If the Trustee resigns or is removed or shall become incapable of acting, or shall be adjudged bankrupt or insolvent, or if a receiver, liquidator or conservator of the Trustee, or of its property, shall be appointed, or if any public officer shall take charge or control of the Trustee, or of its property or affairs, or if a vacancy exists in the office of the Trustee for any reason, the Bank shall promptly appoint a successor Trustee. The Indenture further provides that the Trustee shall act as the Registrar and shall maintain at an office in the Borough of Manhattan, The City of New York.

The Indenture provides that the Trustee shall act as the Paying Agent with respect to the Notes, upon the terms and subject to the conditions set forth in the Indenture. The Indenture provides that the Bank may at any time vary or terminate the appointment of the Paying Agent and appoint a replacement Paying Agent or approve any change in the location of the Paying Agent. In addition, until all outstanding Notes have been delivered to the Trustee for cancellation or monies sufficient to make all such payments on all outstanding Notes have been made available for payment and either paid or returned to the Bank as provided in the Indenture and in the Notes, the Bank will maintain a Paying Agent in the Borough of Manhattan, The City of New York. If the Bank fails to appoint or maintain another entity as Paying Agent (when required pursuant to the Indenture), the Trustee shall act as the Paying Agent. The Bank shall require any Paying Agent other than the Trustee to agree in writing that it will hold in trust for the benefit of the holders or the Trustee all money and other property held by it for any payment due in respect of the Notes and will notify the Trustee of any default by the Bank in making any such payment.

The Indenture provides that the Trustee may appoint an Authenticating Agent or Agents with respect to the Notes which shall be authorized to act on behalf of the Trustee to authenticate, deliver, redeliver or endorse the Notes upon original issue or upon exchange, registration of transfer thereof or in replacement of mutilated, destroyed, stolen or lost certificates, and Notes so authenticated shall be entitled to the benefits of the Indenture and shall be valid and obligatory for all purposes as if authenticated by the Trustee under the Indenture.

The Trustee shall be under no liability for interest on any money or other property received by it under the Indenture except as otherwise agreed with the Bank.

The Bank of New York Mellon is initially serving as the Trustee for the Notes. The Bank of New York Mellon is also initially serving as trustee under our indenture dated as of June 13, 2012 and our indenture as of November 1, 2012, each for our debt securities that rank equally with the Notes. Consequently, if an actual or potential event of default occurs with respect to any of the Notes or such other debt 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 more 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.

Notices

The Indenture provides that, except as otherwise expressly provided therein, where notice to holders of Notes of any event is required to be given under the Indenture, such notice shall be sufficiently given if in writing and mailed, first-class postage prepaid, to each holder (or, in the case of joint holders, to the first holder named in the Register) affected by such event, at the address of each such holder as it appears in the Register, not later than the latest date (if any), and not earlier than the earliest date (if any), prescribed for the giving of such notice. In case by reason of the suspension of regular mail service or by reason of any other cause it shall be impracticable to give such notice to holders by mail, then such notification as shall be made with the approval of the Trustee shall constitute a sufficient notification for every purpose under the Indenture.

Notwithstanding the foregoing, the Indenture provides that, in the case of Global Notes, there may be substituted for such mailing of notice the delivery of the relevant notice to DTC for communication by it to the Direct Participants (as defined below) through whom the holders of interests in the relevant Global Notes hold their interests. Any notice shall be deemed to have been given on the date of the mailing of such notice.

Special Provisions Related to Bail-inable Notes

The Indenture provides for certain provisions applicable to Bail-inable Notes. The relevant Pricing Supplement will describe the specific terms of Bail-inable Notes we may issue and specify whether or not your Note is a Bail-inable Note.

Subject to certain exceptions discussed under "— Canadian Bank Resolution Powers," including for certain structured notes, senior debt issued on or after September 23, 2018, with an initial or amended term to maturity (including explicit or embedded options) greater than 400 days, that is unsecured or partially secured and that has been assigned a CUSIP or ISIN or similar identification number, is 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 the Bail-in Regime.

By its acquisition of any interest in any Bail-inable Note, each holder or beneficial owner of that debt security 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 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; (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.

Holders and beneficial owners of Bail-inable Notes will have no further rights in respect of their Bail-inable Notes to the extent those Bail-inable Notes are converted in a Bail-in Conversion, other than those provided under the Bail-in Regime, and by its acquisition of an interest in any Bail-inable Note, each holder or beneficial owner of that Note is deemed to irrevocably consent to the converted portion of the principal amount of that Note and any accrued and unpaid interest thereon being deemed paid in full by the Bank by the issuance of common shares of the Bank (or, if applicable, any of its affiliates) upon the occurrence of a Bail-in Conversion, which Bail-in Conversion will occur without any further action on the part of that holder or beneficial owner or the trustee; provided that, for the avoidance of doubt, this consent will not limit or otherwise affect any rights that holders or beneficial owners may have under the Bail-in Regime.

Each holder or beneficial owner of a Bail-inable Note that acquires an interest in the Bail-inable Note in the secondary market and any successors, assigns, heirs, executors, administrators, trustees in bankruptcy and legal representatives of any holder or beneficial owner is deemed to acknowledge, accept, agree to be bound by and consent to the same provisions specified herein to the same extent as the holders or beneficial owners that acquired an interest in the Bail-inable Notes upon their initial issuance, including, without limitation, with respect to the acknowledgement and agreement to be bound by and consent to the terms of the Bail-inable Notes related to the Bail-in Regime.

Holders and beneficial owners of Bail-inable Notes will not be entitled to exercise, or direct the exercise of, any set-off or netting rights with respect to their Bail-inable Notes.

Canadian Bank Resolution Powers

General

Under Canadian bank resolution powers, the CDIC may, in circumstances where the Bank has ceased, or is about to cease, to be viable, assume temporary control or ownership of the Bank and may be granted broad powers by one or more Orders, including the power to sell or dispose of all or a part of the assets of the Bank, and the power to carry out or cause the Bank to carry out a transaction or a series of transactions the purpose of which is to restructure the business of the Bank. As part of the Canadian bank resolution powers, certain provisions of the Bail-in Regime provide for a bank recapitalization regime for banks designated by the Superintendent of Financial Institutions as D-SIBs, which include the Bank.

The expressed objectives of the Bail-in Regime include reducing government and taxpayer exposure in the unlikely event of a failure of a D-SIB, reducing the likelihood of such a failure by increasing market discipline and reinforcing that bank shareholders and creditors are responsible for the D-SIBs' risks and not taxpayers, and preserving financial stability by empowering the CDIC to quickly restore a failed D-SIB to viability and allow it to remain open and operating, even where the D-SIB has experienced severe losses.

Under the CDIC Act, in circumstances where the Superintendent of Financial Institutions is of the opinion that the Bank has ceased, or is about to cease, to be viable and viability cannot be restored or preserved by exercise of the Superintendent of Financial Institutions' powers under the Bank Act, the Superintendent of Financial Institutions, after providing the Bank with a reasonable opportunity to make representations, is required to provide a report to CDIC. Following receipt of the Superintendent of Financial Institutions' report, CDIC may request the Minister of Finance for Canada (the "**Minister of Finance**") to recommend that the Governor in Council (*Canada*) make an Order and, if the Minister of Finance is of the opinion that it is in the public interest to do so, the Minister of Finance may recommend that the Governor in Council (Canada) make, and on that recommendation, the Governor in Council (*Canada*) may make, one or more of the following Orders:

- vesting in CDIC, the shares and subordinated debt of the Bank specified in the Order, which we refer to as a "**Vesting Order**";
- appointing CDIC as receiver in respect of the Bank, which we refer to as a "**Receivership Order;**"
- if a Receivership Order has been made, directing the Minister of Finance to incorporate a federal institution designated in the Order as a bridge institution wholly owned by CDIC and specifying the date and time as of which the Bank's deposit liabilities are assumed, which we refer to as a "**Bridge Bank Order;**" or
- if a Vesting Order or Receivership Order has been made, directing CDIC to carry out a conversion, by converting or causing the Bank to convert, in whole or in part by means of a transaction or series of transactions and in one or more steps the shares and liabilities of the Bank that are subject to the Bail-in Regime into common shares of the Bank or any of its affiliates, which we refer to as a "**Conversion Order.**"

Following a Vesting Order or Receivership Order, CDIC will assume temporary control or ownership of the Bank and will be granted broad powers under that Order, including the power to sell or dispose of all or a part of the assets of the Bank, and the power to carry out or cause the Bank to carry out a transaction or a series of transactions the purpose of which is to restructure the business of the Bank.

Under a Bridge Bank Order, CDIC has the power to transfer the Bank's insured deposit liabilities and certain assets and other liabilities of the Bank to a bridge institution. Upon the exercise of that power, any assets and liabilities of the Bank that are not transferred to the bridge institution would remain with the Bank, which would then be wound up. In such a scenario, any liabilities of the Bank, including any outstanding Notes (whether or not such Notes are Bail-inable Notes), that are not assumed by the bridge institution could receive only partial or no repayment in the ensuing wind-up of the Bank.

Upon the making of a Conversion Order, prescribed shares and liabilities under the Bail-in Regime that are subject to that Conversion Order will, to the extent converted, be converted into common shares of the Bank or any of its affiliates, as determined by CDIC. Subject to certain exceptions discussed below, senior debt issued on or after September 23, 2018, with an initial or amended term to maturity (including explicit or embedded options) greater than 400 days, that is unsecured or partially secured and that has been assigned a CUSIP or ISIN or similar identification number are subject to a Bail-in Conversion. Shares, other than common shares, and subordinated debt of the Bank will also be subject to a Bail-in Conversion, unless they are non-viability contingent capital.

Shares and liabilities which would otherwise be bail-inable but were issued before September 23, 2018 will not be subject to a Bail-in Conversion unless, in the case of any such liability, including any notes, the terms of that liability are amended to increase the principal amount or to extend the term to maturity on or after September 23, 2018, and that liability, as amended, meets the requirements to be subject to a Bail-in Conversion. Covered bonds, derivatives and certain structured notes (as such terms are used in the Bail-in Regime) are expressly excluded from a Bail-in Conversion. To the extent that any notes constitute structured notes (as such term is used under the Bail-in

Regime) they will not be Bail-inable Notes. As a result, claims of some creditors whose claims would otherwise rank equally with those of the holders holding Bail-inable Notes would be excluded from a Bail-in Conversion and thus the holders and beneficial owners of Bail-inable Notes will have to absorb losses even when these other creditors do not as a result of the Bail-in Conversion. The terms and conditions of the Bail-in Conversion will be determined by CDIC in accordance with and subject to certain requirements discussed below.

We do not intend to re-open a previous issue of a series of Notes where such re-opening would have the effect of making the relevant Notes of such series subject to Bail-in Conversion.

Bail-in Conversion

Under the Bail-in Regime there is no fixed and pre-determined conversion ratio for the conversion of the Bail-inable Notes, or other shares or liabilities of the Bank that are subject to a Bail-in Conversion, into common shares of the Bank or any of its affiliates nor are there specific requirements regarding whether liabilities subject to a Bail-in Conversion are converted into shares of the Bank or any of its affiliates. CDIC determines the timing of the Bail-in Conversion, the portion of bail-inable shares and liabilities to be converted and the terms and conditions of the conversion, subject to parameters set out in the Bail-in Regime. Those parameters include that:

- in carrying out a Bail-in Conversion, CDIC must take into consideration the requirement in the Bank Act for banks to maintain adequate capital;
- CDIC must use its best efforts to ensure that shares and liabilities subject to a Bail-in Conversion are only converted after all subordinate ranking shares and liabilities that are subject to a Bail-in Conversion and any subordinate non-viability contingent capital instruments have been previously converted or are converted at the same time;
- CDIC must use its best efforts to ensure that the converted part of the liquidation entitlement of a share subject to a Bail-in Conversion, or the converted part of the principal amount and accrued and unpaid interest of a liability subject to a Bail-in Conversion, is converted on a pro rata basis for all shares or liabilities subject to a Bail-in Conversion of equal rank that are converted during the same restructuring period;
- holders of shares and liabilities that are subject to a Bail-in Conversion must receive a greater number of common shares per dollar of the converted part of the liquidation entitlement of their shares, or the converted part of the principal amount and accrued and unpaid interest of their liabilities, than holders of any subordinate shares or liabilities subject to a Bail-in Conversion that are converted during the same restructuring period or of any subordinate non-viability contingent capital that is converted during the same restructuring period;
- holders of shares or liabilities subject to a Bail-in Conversion of equal rank that are converted during the same restructuring period must receive the same number of common shares per dollar of the converted part of the liquidation entitlement of their shares or the converted part of the principal amount and accrued and unpaid interest of their liabilities; and
- holders of shares or liabilities subject to a Bail-in Conversion must receive, if any non-viability contingent capital of equal rank to the shares or liabilities is converted during the same restructuring period, a number of common shares per dollar of the converted part of the liquidation entitlement of their shares, or the converted part of the principal amount and accrued and unpaid interest of their liabilities, that is equal to the largest number of common shares received by any holder of the non-viability contingent capital per dollar of that capital.

Compensation Regime

The CDIC Act provides for a compensation process for holders of Bail-inable Notes who immediately prior to the making of an Order, directly or through an intermediary, own Bail-inable Notes that are converted in a Bail-in Conversion. While this process applies to successors of those holders it does not apply to assignees or transferees of the holder following the making of the Order and does not apply if the amounts owing under the relevant Bail-inable Notes are paid in full.

Under the compensation process, the compensation to which such holders are entitled is the difference, to the extent it is positive, between the estimated liquidation value and the estimated resolution value of the relevant Bail-inable Notes. The liquidation value is the estimated value the Bail-inable Noteholders would have received if an order under the *Winding-up and Restructuring Act* (Canada) had been made in respect of the Bank, as if no Order had been made and without taking into consideration any assistance, financial or otherwise, that is or may be provided to the Bank, directly or indirectly, by CDIC, the Bank of Canada, the Government of Canada or a province of Canada, after any order to wind up the Bank has been made.

The resolution value in respect of relevant Bail-inable Notes is the aggregate estimated value of the following: (a) the relevant Bail-inable Notes, if they are not held by CDIC and they are not converted, after the making of an Order, into common shares under a Bail-in Conversion; (b) common shares that are the result of a Bail-in Conversion after the making of an Order; (c) any dividend or interest payments made, after the making of the Order, with respect to the relevant Bail-inable Notes to any person other than CDIC; and (d) any other cash, securities or other rights or interests that are received or to be received with respect to the relevant Bail-inable Notes as a direct or indirect result of the making of the Order and any actions taken in furtherance of the Order, including from CDIC, the Bank, the liquidator of the Bank, if the Bank is wound up, the liquidator of a CDIC subsidiary incorporated or acquired by order of the Governor in Council for the purposes of facilitating the acquisition, management or disposal of real property or other assets of the Bank that CDIC may acquire as the result of its operations that is liquidated or the liquidator of a bridge institution if the bridge institution is wound up.

In connection with the compensation process, CDIC is required to estimate the liquidation value and the resolution value in respect of the portion of converted Bail-inable Notes and is required to consider the difference between the estimated day on which the liquidation value would be received and the estimated day on which the resolution value is, or would be, received.

CDIC must, within a reasonable period following a Bail-in Conversion, make an offer of compensation by notice to the relevant holders that held Bail-inable Notes equal to, or in value estimated to be equal to, the amount of compensation to which such holders are entitled or provide a notice stating that such holders are not entitled to any compensation. In either case such offer or notice is required to include certain prescribed information, including important information regarding the rights of such holders to seek to object and have the compensation to which they are entitled determined by an assessor (a Canadian Federal Court judge) where holders of liabilities representing at least 10% of the principal amount and accrued and unpaid interest of the liabilities of the same class object to the offer or absence of compensation. The period for objecting is limited (45 days following the day on which a summary of the notice is published in the *Canada Gazette*) and failure by holders holding a sufficient principal amount plus accrued and unpaid interest of affected Bail-inable Notes to object within the prescribed period will result in the loss of any ability to object to the offered compensation or absence of compensation, as applicable. CDIC will pay the relevant holders the offered compensation within 135 days after the date on which a summary of the notice is published in the *Canada Gazette* if the offer of compensation is accepted, or the holder does not notify CDIC of acceptance or objection to the offer or if the holder objects to the offer but the 10% threshold described above is not met within the aforementioned 45-day period.

Where an assessor is appointed, the assessor could determine a different amount of compensation payable, which could either be higher or lower than the original amount. The assessor is required to provide holders, whose compensation it determines, notice of its determination. The assessor's determination is final and there are no further opportunities for review or appeal. CDIC will pay the relevant holders the compensation amount determined by the assessor within 90 days of the assessor's notice.

By its acquisition of an interest in any Bail-inable Note, each holder or beneficial owner of that note is deemed to be bound by a Bail-in Conversion and so will have no further rights in respect of its Bail-inable Notes to the extent those Bail-inable Notes are converted in a Bail-in Conversion, other than those provided under the Bail-in Regime.

A similar compensation process to the one set out above applies, in certain circumstances, where as a result of CDIC's exercise of bank resolution powers, notes are assigned to an entity which is then wound-up.

TLAC Guideline

In connection with the Bail-in Regime, the TLAC Guideline applies to and establishes standards for D-SIBs, including the Bank. Under the TLAC Guideline, beginning November 1, 2021, the Bank is required to maintain a

minimum capacity to absorb losses composed of unsecured external long-term debt that meets the prescribed criteria or regulatory capital instruments to support recapitalization in the event of a failure. Bail-inable Notes and regulatory capital instruments that meet the prescribed criteria will constitute TLAC of the Bank.

In order to comply with the TLAC Guideline, our Indenture provides for terms and conditions for the Bail-inable Notes necessary to meet the prescribed criteria and qualify at their issuance as TLAC instruments of the Bank under the TLAC Guideline. Those criteria include the following:

- the Bank cannot directly or indirectly have provided financing to any person for the express purpose of investing in the Bail-inable Notes;
- the Bail-inable Note is not subject to set-off or netting rights;
- the Bail-inable Note must not provide rights to accelerate repayment of principal or interest payments outside of bankruptcy, insolvency, wind-up or liquidation, except that events of default relating to the non-payment of scheduled principal and/or interest payments will be permitted where they are subject to a cure period of no less than 30 business days and clearly disclose to investors that: (i) acceleration is only permitted where an Order has not been made in respect of the Bank; and (ii) notwithstanding any acceleration, the instrument continues to be subject to a Bail-in Conversion prior to its repayment;
- the Bail-inable Note may be redeemed or purchased for cancellation only at the initiative of the Bank and, where the redemption or purchase would lead to a breach of the Bank's TLAC requirements, that redemption or purchase would be subject to the prior approval of the Superintendent of Financial Institutions;
- the Bail-inable Note does not have credit-sensitive dividend or coupon features that are reset periodically based in whole or in part on the Bank's credit standing; and
- where an amendment or variance of the Bail-inable Note's terms and conditions would affect its recognition as TLAC, that amendment or variance will only be permitted with the prior approval of the Superintendent of Financial Institutions.

Role of Calculation Agent

The Calculation Agent will make all determinations regarding the reference rate, the amount payable on your Notes, and any other required determinations. 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.

Unless otherwise specified in the applicable Supplement, the Bank or one of its affiliates will be the Calculation Agent. We may change the Calculation Agent for your Notes at any time in our discretion without notice and the Calculation Agent may resign as Calculation Agent at any time upon 60 days' written notice to the Bank.

Additional Issuances

The Bank from time to time without the consent of the relevant Noteholders may create and issue additional Series of Notes having terms and conditions the same as (or the same in all respects except for the Issue Date, Interest Commencement Date and the Issue Price) Notes of an existing Series. These additional Notes shall be consolidated and form a single Series with the outstanding Notes of the existing Series.

Governing Law; Consent to Jurisdiction and Service of Process; Immunity

The Indenture, the Notes and the Guarantee will be governed and construed in accordance with the laws of the State of New York, except that by its acquisition of an interest in any Bail-inable Note, each holder or beneficial owner of that Note agrees to be bound, in respect of the Bail-inable Notes, by the CDIC Act, including the Bail-in Conversion, and by the application of the federal laws of Canada or of a province thereof in respect of the operation of the CDIC Act with respect to the Bail-inable Notes, and attorns to the jurisdiction of the courts in the Province of Québec with respect to actions, suits and proceedings arising out of or relating to the operation of the CDIC Act and the laws of the Province of Québec and the federal laws of Canada applicable therein in respect of the Indenture and the Bail-inable Notes.

The Bank has consented to the jurisdiction of the courts of the State of New York and the U.S. courts located in the Borough of Manhattan in New York City with respect to any action that may be brought in connection with the Notes, except those actions subject to the jurisdiction of the courts in the Province of Québec as provided in the paragraph above. The Bank has appointed National Bank of Canada, New York Branch (The Park Avenue Tower, 65 East 55th Street, 8th Floor, New York, NY 10022) as its agent upon whom process may be served in any action brought against the Bank in any U.S. or New York State court.

The Bank and its properties are currently not entitled to any sovereign or other immunity and the Bank has agreed that, to the extent that it may hereafter become entitled to any such immunity, it waives such immunity with respect to matters arising out of or in connection with the Notes.

Each of the Bank, the Trustee and the Guarantor has, pursuant to the Indenture, waived any right to trial by jury in any legal proceedings relating to the Notes. By your acceptance of a Note, you are also deemed to waive any such right to trial by jury in any legal proceedings relating to the Notes.

THE GUARANTEE

Neither the Notes nor the Guarantee are insured or guaranteed by the Federal Deposit Insurance Corporation or any other governmental agency or authority in the United States, Canada or elsewhere.

Pursuant to the Guarantee, NBCNY unconditionally and irrevocably guarantees to the holders of the Notes the Redemption Amount, together with interest (if any) or other amounts payable on the Notes, if such amounts have not been received by the holders at the time such payment is due and payable (after giving effect to all the applicable cure periods). Under the terms of the Guarantee, the Guarantor has waived diligence, presentment, demand, protest and notice of any kind with respect to the Guarantee. The Guarantor has also waived any requirement that the holders of the Notes exhaust any rights or take any action against the Bank in respect of the obligations covered by the Guarantee. The Guarantee provides that in the event of a default in payment of any amounts due and payable to the holders in respect of the Notes, the holders may institute legal proceedings directly against the Guarantor to enforce the Guarantee without first proceeding against the Bank.

The Guarantee (i) is a direct, general, unconditional, unsecured and unsubordinated obligation of the Guarantor and ranks equally with all other present and future unconditional, unsecured and unsubordinated obligations of the Guarantor, except those mandatorily preferred by law, (ii) is a continuing guarantee, (iii) is irrevocable and (iv) is a guarantee of payment of the amounts due and payable under the Notes and not of collection. The Guarantee shall not be discharged except by the payment of all amounts due and payable under the Notes. The Guarantee provides that it will remain in full force and effect or shall be reinstated if at any time any payment by the Bank on the Notes, in whole or in part, is rescinded or must otherwise be returned by any holder of the Notes upon the bankruptcy, insolvency, reorganization or similar proceeding involving the Bank, all as though such payment had not been made. ***The Guarantee, however, does not obligate the Guarantor or any other party to make a secondary market in the Notes or to make or guarantee any payments with respect to any secondary market transactions.***

The Indenture provides that the Guarantee will be governed by, and construed in accordance with, the laws of the State of New York, United States of America.

BOOK-ENTRY CLEARANCE SYSTEMS

The information set out below is subject to any change in or reinterpretation of the rules, regulations and procedures of the Clearing Systems currently in effect. The information in this section concerning the Clearing Systems has been obtained from sources that the Bank and the Guarantor believe to be reliable, but none of the Bank, the Guarantor, the Trustee nor any Agent takes any responsibility for the accuracy thereof. Investors wishing to use the facilities of any of the Clearing Systems are advised to confirm the continued applicability of the rules, regulations and procedures of the relevant Clearing System. None of the Bank, the Guarantor nor any other party to the Indenture will have any responsibility or liability for any aspect of the records relating to, or payments made on account of beneficial ownership interests in the Notes held through the facilities of any Clearing System or for maintaining, supervising or reviewing any records relating to such beneficial ownership interests.

Book-Entry Systems

DTC

DTC will act as securities depository for the Notes. The Notes will be issued as fully-registered securities registered in the name of Cede & Co. (DTC's nominee) or such other name as may be requested by an authorized representative of DTC.

DTC has advised the Bank that it 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 Section 17A of the Exchange Act. DTC holds and provides asset servicing for securities that its participants ("**Direct Participants**") deposit with DTC. DTC also facilitates the post-trade settlement among Direct Participants of sales and other securities transactions in deposited securities through electronic computerized book-entry transfers and pledges between Direct Participants' accounts, thereby eliminating the need for physical movement of securities certificates. Direct 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 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. securities brokers and dealers, banks, trust companies and clearing corporations that clear through or maintain a custodial relationship with a Direct Participant, either directly or indirectly ("**Indirect Participants**"). The rules applicable to its DTC and its participants are on file with the SEC. More information about DTC can be found at www.dtcc.com. We are not incorporating by reference into this document the website or any material it includes.

Purchases of the Notes under the DTC system must be made by or through Direct Participants, which will receive a credit for the Notes on DTC's records. The ownership interest of each actual purchaser of each Note ("**Beneficial Owner**") is in turn to be recorded on the Direct Participant's and Indirect Participant's records. Beneficial Owners will not receive written confirmation from DTC of their purchase, but Beneficial Owners are 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 Notes are to be accomplished by entries made on the books of Participants acting on behalf of Beneficial Owners. Beneficial Owners will not receive certificates representing their ownership interests in the Notes, except in the event that use of the book-entry system for the Notes is discontinued.

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

Conveyance of notices and other communications by DTC to Direct Participants, by Direct Participants to Indirect Participants, and by Direct Participants and Indirect Participants to Beneficial Owners will be governed by arrangements among them, subject to any statutory or regulatory requirements as may be in effect from time to time.

Redemption notices shall be sent to DTC. If less than all of the Notes within an issue are being redeemed, DTC's practice is to determine by lot the amount of the interest of each Direct Participant in such issue to be redeemed.

Neither DTC nor Cede & Co. (nor any other DTC nominee) will consent or vote with respect to the Notes unless authorized by a Direct Participant in accordance with DTC's Procedures. Under its usual procedures, DTC mails an Omnibus Proxy to the Bank 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 the Notes are credited on the record date (identified in a listing attached to the Omnibus Proxy).

Principal and interest payments on the Notes will be made to Cede & Co., or such other nominee as may be requested by an authorized representative of DTC. DTC's practice is to credit Direct Participants' accounts, upon DTC's receipt of funds and corresponding detail information from the Bank or the Paying Agent, on the payable date in accordance with their respective holdings shown on DTC's records. Payments by Participants to Beneficial Owners will be governed by standing instructions and customary practices, as is the case with securities held for the accounts of customers in bearer form or registered in "street name," and will be the responsibility of such Participant and not of DTC or its nominee, the Paying Agent, the Bank, the Guarantor, the Trustee or the Agents, subject to any statutory or regulatory requirements as may be in effect from time to time. Payment of redemption proceeds, distributions, and dividend payments to Cede & Co. (or such other nominee as may be requested by an authorized representative of DTC) is the responsibility of the Bank or the relevant Agent, disbursement of such payments to Direct Participants will be the responsibility of DTC, and disbursement of such payments to the Beneficial Owners will be the responsibility of Direct Participants and Indirect Participants.

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

Book-Entry Ownership of and Payments in Respect of the Notes

The Bank may apply to DTC in order to have the Notes represented by a Global Note accepted in its book-entry settlement system. Upon the issue of any such Global Note, DTC or its custodian will credit, on its internal book-entry system, the respective nominal amounts of the individual beneficial interests represented by such Global Note to the accounts of persons who have accounts with DTC. Such accounts initially will be designated by or on behalf of the relevant Agent. Ownership of beneficial interests in such a Global Note will be limited to Direct Participants or Indirect Participants, including, the respective depositaries of CDS, Euroclear and Clearstream, Luxembourg. Ownership of beneficial interests in a Global Note accepted by DTC will be shown on, and the transfer of such ownership will be effected only through, records maintained by DTC or its nominee (with respect to the interests of Direct Participants) and the records of Direct Participants (with respect to interests of Indirect Participants).

Payments of principal and interest in respect of a Global Note accepted by DTC will be made to the order of DTC or its nominee as the registered holder of such Note.

The Bank expects DTC to credit accounts of Direct Participants on the applicable payment date in accordance with their respective holdings as shown in the records of DTC unless DTC has reason to believe that it will not receive payment on such payment date. The Bank also expects that payments by Participants to beneficial owners of Notes will be governed by standing instructions and customary practices, as is the case with securities held for the accounts of customers, and will be the responsibility of such Participant and not the responsibility of DTC, the Trustee, the Paying Agent, the Registrar, the Bank, the Guarantor or the Agents. Payment of principal, premium, if any, and interest, if any, on Notes to DTC is the responsibility of the Bank, and the Guaranteed Amounts in respect thereof are obligations of the Guarantor under the Guarantee.

Transfers of Notes Represented by Global Notes

Transfers of any interests in Notes represented by a Global Note within CDS, DTC, Euroclear and Clearstream, Luxembourg will be effected in accordance with the customary rules and operating procedures of the relevant clearing system. The laws in some States within the United States require that certain persons take physical delivery of securities in definitive form. Consequently, the ability to transfer Notes represented by a Global Note to such persons may depend upon the ability to exchange such Notes for Notes in definitive form. Similarly, because DTC can only act on behalf of Direct Participants in the DTC system who in turn act on behalf of Indirect Participants, the ability of a person having an interest in Notes represented by a Global Note accepted by DTC to pledge such Notes

to persons or entities that do not participate in the DTC system or otherwise to take action in respect of such Notes may depend upon the ability to exchange such Notes for Notes in definitive form. The ability of any holder of Notes represented by a Global Note accepted by DTC to resell, pledge or otherwise transfer such Notes may be impaired if the proposed transferee of such Notes is not eligible to hold such Notes through a direct or indirect participant in the DTC system.

Subject to compliance with the transfer restrictions applicable to the Notes described under "*Plan of Distribution and Conflicts of Interest*," cross-market transfers between DTC, on the one hand, and directly or indirectly through CDS, Clearstream, Luxembourg or Euroclear accountholders, on the other, will be effected by the relevant clearing system in accordance with its rules and through action taken by the Registrar, the Paying Agent and any custodian ("**Custodian**") with whom the relevant Global Notes have been deposited.

Cross-market transfers between accountholders in CDS, Euroclear or Clearstream, Luxembourg and DTC participants will need to have an agreed settlement date between the parties to such transfer. Because there is no direct link between DTC, on the one hand, and CDS, Euroclear and Clearstream, Luxembourg, on the other, transfers of interests in the relevant Global Notes will be effected through the Registrar, the Paying Agent and the Custodian receiving instructions (and, where appropriate, certification) from the transferor and arranging for delivery of the interests being transferred to the credit of the designated account for the transferee. In the case of cross-market transfers, settlement between CDS, Euroclear or Clearstream, Luxembourg accountholders and DTC participants cannot be made on a delivery versus payment basis. The Notes will be delivered on a free delivery basis and arrangements for payment must be made separately.

DTC, CDS, Euroclear and Clearstream, Luxembourg have each published rules and operating procedures designed to facilitate transfers of beneficial interests in Global Notes among participants and accountholders of DTC, CDS, Euroclear and Clearstream, Luxembourg. However, they are under no obligation to perform or continue to perform such procedures, and such procedures may be discontinued or changed at any time. None of the Trustee, the Bank, the Guarantor, the Paying Agent or any Agent will be responsible for any performance by DTC, CDS, Euroclear or Clearstream, Luxembourg or their respective direct or indirect participants or accountholders of their respective obligations under the rules and procedures governing their operations and none of them will have any liability for any aspect of the records relating to or payments made on account of beneficial interests in the Notes represented by Global Notes or for maintaining, supervising or reviewing any records relating to such beneficial interests.

Bail-in Conversion

Upon a Bail-in Conversion, the Bank will provide a written notice to DTC and the holders of Bail-inable Notes through DTC as soon as practicable regarding such Bail-in Conversion. We will also deliver a copy of such notice to the trustee for information purposes.

By its acquisition of an interest in any Bail-inable Note, each holder or beneficial owner of that Note is deemed to have authorized, directed and requested DTC and any direct participant in DTC or other intermediary through which it holds such Bail-inable Note to take any and all necessary action, if required, to implement the Bail-in Conversion or other action pursuant to the Bail-in Regime with respect to the Bail-inable Note as it may be imposed on it, without any further action or direction on the part of that holder or beneficial owner, the trustee or the paying agent.

TAXATION

Canada

The following summary describes the principal Canadian federal income tax considerations under the *Income Tax Act* (Canada) (the "**Act**") and the regulations thereunder generally applicable to a holder of Notes who acquires Notes, including entitlements to all payments thereunder, as a beneficial owner pursuant to this Offering Circular, and who, for purposes of the application of the Act and any applicable income tax treaty or convention, at all relevant times, is not resident and is not deemed to be resident in Canada, deals at arm's length with the Bank and any Canadian resident (or deemed Canadian resident) to whom the holder disposes or is deemed to have disposed of the Notes, does not use or hold and is not deemed to use or hold Notes in or in the course of carrying on a business in Canada, is not a "specified shareholder" of the Bank and is not a person who does not deal at arm's length with a specified shareholder of the Bank for purposes of subsection 18(5) of the Act and is not an insurer carrying on an insurance business in Canada and elsewhere (a "**Non-resident Holder**").

This summary is based upon the provisions of the Act and the regulations thereunder in force on the date hereof, proposed amendments to the Act and the regulations thereunder in a form publicly announced prior to the date hereof by or on behalf of the Minister of Finance (Canada) (the "**Proposed Amendments**") and Canadian counsel's understanding of the current administrative and assessing practices and policies published in writing by the Canada Revenue Agency prior to the date hereof. This summary assumes that all Proposed Amendments will be enacted in the form proposed. There can be no assurance that the Proposed Amendments will be enacted as proposed or at all. This summary does not take into account or anticipate any other changes in law or administrative and assessing practices and policies, whether by legislative, governmental or judicial action or interpretation, nor does it take into account other federal or provincial, territorial or foreign income tax legislation or considerations. Subsequent developments could have a material effect on the following description.

Canadian federal income tax considerations applicable to Notes may be described more particularly when such Notes are offered (and then only to the extent material) in a Supplement related thereto if they are not addressed by the comments following and, in that event, the following will be superseded thereby to the extent indicated in such Supplement. These Canadian federal income tax considerations may also be supplemented, amended and/or replaced in a Supplement.

Interest paid or credited or deemed to be paid or credited by the Bank on a Note or by the Guarantor pursuant to the Guarantee (including amounts on account or in lieu of payment of, or in satisfaction of, interest and amounts paid at maturity in excess of the principal amount and interest deemed to be paid in certain cases involving the assignment or other transfer of a Note to a resident in Canada) to a Non-resident Holder will not be subject to Canadian 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 on any class of shares of a corporation ("**Participating Debt Interest**"). A "prescribed obligation" is a debt obligation the terms or conditions of which provide for an adjustment to any 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 where no amount payable in respect of such obligation, other than an amount determined by reference to a change in the purchasing power of money, is contingent or dependent upon 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 Note is to be Participating Debt Interest, the Canadian non-resident withholding tax implications of the issuance of such Notes will be described particularly in the relevant Supplement for such Notes.

There should be no other taxes on income (including taxable capital gains) payable in respect of a Note or interest, discount, or premium thereon by a Non-resident Holder.

The foregoing 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 Non-resident Holder. Non-resident Holders should therefore consult their own tax advisers with respect to their particular circumstances.

United States Federal Income Taxation

The following summary discusses certain U.S. federal income tax consequences of the ownership and disposition of the Notes. Except as specifically noted below, this discussion applies only to:

- Notes purchased on original issuance at their "issue price" (as defined below)
- Notes held as capital assets for U.S. federal income tax purposes; and
- U.S. holders (as defined below).

This discussion does not describe all of the tax consequences that may be relevant in light of a holder's particular circumstances, nor does it address any aspect of U.S. state and local, or non-U.S., tax laws. In particular, this discussion does not describe all of the tax consequences that may be relevant to holders subject to special rules, such as:

- financial institutions;
- insurance companies;
- tax-exempt organizations;
- real estate investment trusts;
- regulated investment companies;
- dealers in securities or foreign currencies;
- traders in securities that elect to use a mark-to-market method of accounting for their securities holdings;
- persons holding Notes as part of a hedging transaction, "straddle," conversion transaction or other integrated transaction;
- persons that purchase or sell securities as part of a wash sale for tax purposes;
- persons that actually or constructively own 10% or more of our stock, by vote or value;
- persons liable for alternative minimum tax or Medicare contribution tax;
- persons subject to special tax accounting rules under Section 451(b) of the Code;
- certain former citizens or residents of the United States;
- U.S. holders whose functional currency is not the U.S. dollar; or
- partnerships or other entities classified as partnerships for U.S. federal income tax purposes.

This summary is based on the Code, administrative pronouncements, judicial decisions and final, temporary and proposed U.S. Treasury Regulations, changes to any of which subsequent to the date of this Offering Circular may affect the tax consequences described below. Persons considering the purchase of the Notes should consult the applicable Supplement for any additional discussion regarding U.S. federal income taxation and should consult their tax advisers with regard to the application of the U.S. federal tax laws to their particular situations as well as any tax consequences arising under the laws of any U.S. state and local, or non-U.S. taxing jurisdiction.

As used herein, the term "**U.S. holder**" means a beneficial owner of a Note that is for U.S. federal income tax purposes:

- a citizen or individual resident of the United States;

- a corporation (or other entity classified as a corporation) created or organized in or under the laws of the United States or of any state thereof;

- a trust if (i) a U.S. court can exercise primary supervision over the trust's administration and one or more U.S. persons are authorized to control all substantial decisions of the trust, or (ii) the trust has a valid election in place under U.S. Treasury Regulations to be treated as a U.S. person for U.S. federal income tax purposes; or

- an estate whose income is subject to U.S. federal income taxation regardless of its source.

If an entity that is classified as a partnership for U.S. federal income tax purposes holds Notes, the U.S. federal income tax treatment of a partner will generally depend on the status of the partner and upon the activities of the partnership. Partners of partnerships holding Notes should consult with their tax advisers.

Characterization of the Notes

Subject to the discussion below regarding Bail-inable Notes, the Bank generally intends to treat Notes issued under the Program as debt for U.S. federal income tax purposes, unless otherwise indicated in the applicable Supplement. The tax treatment of Notes to which a treatment other than as debt may apply may be discussed in the applicable Supplement. The following disclosure applies only to Notes that are treated as debt for U.S. federal income tax purposes.

There is no authority that specifically addresses the U.S. federal income tax treatment of an instrument such as the Bail-inable Notes. While the Bank intends to treat the Bail-inable Notes as debt for U.S. federal income tax purposes, the IRS could assert an alternative tax treatment of the Bail-inable Notes for U.S. federal income tax purposes, for example, that the Bail-inable Notes should be considered as equity for U.S. federal income tax purposes. There can be no assurance that any alternative tax treatment, if successfully asserted by the IRS, would not have adverse U.S. federal income tax consequences to a U.S. holder of Bail-inable Notes. However, treatment of the Bail-inable Notes as equity for U.S. federal income tax purposes should not result in inclusions of income with respect to the Bail-inable Notes that are materially different than the U.S. federal income tax consequences if the Bail-inable Notes are treated as debt for U.S. federal income tax purposes. In particular, if the Bail-inable Notes are treated as equity for U.S. federal income tax purposes, it is unclear whether interest payments on the Bail-inable Notes that are treated as dividends for U.S. federal income tax purposes would be eligible to be treated as "qualified dividend income" for U.S. federal income tax purposes (which are generally taxed at preferential rates). Accordingly, it is likely that amounts treated as dividends would be taxed at ordinary income tax rates.

You should consult your own tax advisers regarding the appropriate characterization of, and U.S. federal income tax and other tax consequences of investing in, the Notes.

Payments of Stated Interest

Interest paid on a Note will be taxable to a U.S. holder as ordinary interest income at the time it accrues or is received in accordance with the holder's method of accounting for U.S. federal income tax purposes, provided that the interest is "qualified stated interest" (as defined below). Interest income earned by a U.S. holder with respect to a Note will constitute foreign source income for U.S. federal income tax purposes, which may be relevant in calculating the holder's foreign tax credit limitation. The rules regarding foreign tax credits are complex and prospective investors should consult their tax advisers about the application of such rules to them in their particular circumstances. Special rules governing the treatment of interest paid with respect to original issue discount Notes, certain Notes that have a variable interest rate, short-term Notes and foreign currency Notes are described under "*Taxation – United States Federal Income Taxation – Original Issue Discount*," "*– Variable Rate Debt Instruments*," "*– Short-Term Notes*" and "*– Foreign Currency Notes.*"

Original Issue Discount

A Note that has an "issue price" that is less than its "stated redemption price at maturity" will be considered to have been issued at an original issue discount for U.S. federal income tax purposes (and will be referred to as an "**original issue discount Note**") unless the Note satisfies a *de minimis* threshold (as described below) or is a short-term Note (as defined below). The "**issue price**" of a Note generally will be the first price at which a substantial

amount of the Notes are sold to the public (which does not include sales to bond houses, brokers or similar persons or organizations acting in the capacity of underwriters, placement agents or wholesalers). The "**stated redemption price at maturity**" of a Note generally will equal the sum of all payments required to be made under the Note other than payments of "qualified stated interest." "**Qualified stated interest**" is stated interest unconditionally payable (other than in debt instruments of the issuer) at least annually during the entire term of the Note and equal to the outstanding principal balance of the Note multiplied by a single fixed rate of interest. In addition, qualified stated interest includes, among other things, stated interest on a "variable rate debt instrument" (as defined below). If the terms of Notes that mature more than one year from their date of issuance provide for certain contingencies that affect the timing and amount of payments (including Notes with a variable rate or rates that do not qualify as "variable rate debt instruments" for purposes of the original issue discount rules) they will be "contingent payment debt instruments" for U.S. federal income tax purposes. The proper U.S. federal income tax treatment of "contingent payment debt instruments" may be more fully described in the applicable Supplement.

If the difference between a Note's stated redemption price at maturity and its issue price is less than a *de minimis* amount, i.e., 1/4 of 1 percent of the stated redemption price at maturity multiplied by the number of complete years to maturity (or, if the Note is an installment obligation as defined for these purposes, the weighted average maturity), the Note will not be considered to have original issue discount. U.S. holders of Notes with a *de minimis* amount of original issue discount generally will include this original issue discount in income, as capital gain, on a pro rata basis as principal payments are made on the Note.

A U.S. holder of original issue discount Notes will be required to include any qualified stated interest payments in income in accordance with the holder's method of accounting for U.S. federal income tax purposes. U.S. holders of original issue discount Notes that mature more than one year from their date of issuance will be required to include original issue discount in income for U.S. federal tax purposes as it accrues in accordance with a constant yield method based on a compounding of interest, regardless of whether cash attributable to this income is received.

A U.S. holder may make an election to include in gross income all interest that accrues on any Note (including stated interest, acquisition discount, original issue discount, *de minimis* original issue discount, market discount, *de minimis* market discount and unstated interest, as adjusted by any amortizable bond premium or acquisition premium) in accordance with a constant yield method based on the compounding of interest, and may revoke such election only with the permission of the U.S. Internal Revenue Service ("**IRS**") (a "**constant yield election**"). Generally, a constant yield election will apply only to the Note for which a U.S. holder makes it; however, if the Note has amortizable bond premium, the U.S. holder would be deemed to have made an election discussed below under "*Taxation – United States Federal Income Taxation – Acquisition Premium and Amortizable Bond Premium*" 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 the U.S. holder holds as of the beginning of the taxable year to which the election applies or any taxable year thereafter. Additionally, if a U.S. holder makes this election for a Note with market discount, the U.S. holder would be treated as having made the election discussed below under "*Taxation – United States Federal Income Taxation – Market Discount*" to include market discount in income currently over the life of all debt instruments with market discount that the U.S holder acquires on or after the first day of the first taxable year to which the election applies. A U.S. holder may not revoke any election to apply the constant-yield method to all interest on a Note or the deemed elections with respect to debt instruments with amortizable bond premium or market discount without the consent of the IRS.

The Bank may have an unconditional option to redeem, or U.S. holders may have an unconditional option to require the Bank to redeem, a Note prior to its stated maturity date. Under applicable regulations, if the Bank has an unconditional option to redeem a Note prior to its stated maturity date, this option will be presumed to be exercised if, by utilizing any date on which the Note may be redeemed as the maturity date and the amount payable on that date in accordance with the terms of the Note as the stated redemption price at maturity, the yield on the Note would be lower than its yield to maturity. If the U.S. holders have an unconditional option to require the Bank to redeem a Note prior to its stated maturity date, this option will be presumed to be exercised if making the same assumptions as those set forth in the previous sentence, the yield on the Note would be higher than its yield to maturity. If this option is not in fact exercised, the Note would be treated solely for purposes of calculating original issue discount as if it were retired and then reissued, on the presumed exercise date for an amount equal to the Note's adjusted issue price on that date. The adjusted issue price of an original issue discount Note is defined as the sum of the issue price of the Note and the aggregate amount of previously accrued original issue discount, less any prior payments other than payments of qualified stated interest.

Variable Rate Debt Instruments

A Note will generally be a "**variable rate debt instrument**" if: (i) the issue price does not exceed the total noncontingent principal payments by more than the lesser of: (a) 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, in the case of an installment obligation, the weighted average maturity), or (b) 15 percent of the total noncontingent principal payments, and (ii) the Note provides for stated interest, compounded or paid at least annually, only at: (a) one or more "qualified floating rates," (b) a single fixed rate and one or more "qualified floating rates," (c) a single "objective rate," or (d) a single fixed rate and a single "objective rate" that is a "qualified inverse floating rate."

A Note will have a variable rate that is a "**qualified floating rate**" if: (i) 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 the Note is denominated, or (ii) the rate is equal to such a rate multiplied by either: (a) a fixed multiple that is greater than 0.65 but not more than 1.35, or (b) a fixed multiple greater than 0.65 but not more than 1.35, increased or decreased by a fixed rate, and (iii) the value of the rate on any date during the term of the Note 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.

If a Note 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 Note, the qualified floating rates together constitute a single qualified floating rate.

A Note will not have a qualified floating rate, however, if the rate is subject to certain restrictions (including caps, floors, governors, or other similar restrictions) unless, in general, such restrictions are fixed throughout the term of the Note or are not reasonably expected to significantly affect the yield on the Note.

A Note will have a variable rate that is a single "**objective rate**" if: (i) the rate is not a qualified floating rate, (ii) 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 issuer or a related party, and (iii) the value of the rate on any date during the term of the Note 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.

A Note will 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 the Note's term will be either significantly less than or significantly greater than the average value of the rate during the final half of the Note's term.

An objective rate as described above is a "**qualified inverse floating rate**" if: (i) the rate is equal to a fixed rate minus a qualified floating rate, and (ii) the variations in the rate can reasonably be expected to inversely reflect contemporaneous variations in the qualified floating rate.

A Note will also have a single qualified floating rate or an objective rate if interest on the Note 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: (i) the fixed rate and the qualified floating rate or objective rate have values on the issue date of the Note that do not differ by more than 0.25 percentage points, or (ii) the value of the qualified floating rate or objective rate on the issue date of the Note is intended to approximate the fixed rate (a "**single fixed rate for an initial period**").

In general, if a Note provides for annual stated interest, unconditionally payable in cash or property (other than debt instruments of the issuer), at a single qualified floating rate or objective rate, or one of those rates after a single fixed rate for an initial period, all stated interest on the Note is qualified stated interest. In this case, the amount of original issue discount, 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 the Note. The qualified stated interest allocable to an accrual period is adjusted if the interest actually paid during an accrual period exceeds or is less than the interest assumed to be paid during the accrual period under this paragraph.

If a Note 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, a U.S. holder

generally must determine the interest and original issue discount accruals on the Note by: (i) determining a fixed rate substitute for each variable rate provided under the variable rate debt instrument, (ii) constructing the equivalent fixed rate debt instrument, using the fixed rate substitute described above, (iii) determining the amount of qualified stated interest and original issue discount with respect to the equivalent fixed rate debt instrument, and (iv) adjusting for actual variable rates during the applicable accrual period.

In determining the fixed rate substitute for each variable rate provided under the variable rate debt instrument, U.S. holder 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 the Note.

If a Note 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, a U.S. holder generally must determine interest and original issue discount accruals by using the method described in the second preceding paragraph. However, a Note will be treated, for purposes of the first three steps of the determination, as if the Note 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 the Note 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 Notes

A Note that matures one year or less from its date of issuance (a "**short-term Note**") will be treated as being issued at a discount and none of the interest paid on the Note will be treated as qualified stated interest. In general, a cash method U.S. holder of a short-term Note is not required to accrue the discount for U.S. federal income tax purposes unless it elects to do so, but may be required to include any stated interest in income as the interest is received. Holders who so elect and certain other holders, including those who report income on the accrual method of accounting for U.S. federal income tax purposes, are required to include the discount in income as it accrues on a straight-line basis, unless another election is made to accrue the discount according to a constant yield method based on daily compounding. The discount that such holders are required to include in income generally is the amount of original issue discount (the excess of the stated redemption price at maturity over the Note's issue price) unless a holder elects instead to accrue the amount by which the stated redemption price at maturity exceeds the holder's basis in the Note. In the case of a U.S. holder who is not required and who does not elect to include the discount in income currently, any gain realized on the sale, exchange, retirement, or other disposition of the short-term Note will be ordinary income to the extent of the original issue discount accrued on a straight-line basis (or, if elected, according to a constant yield method based on daily compounding) through the date of sale, exchange, retirement, or other disposition. In addition, those U.S. holders will be required to defer deductions for any interest paid on indebtedness incurred to purchase or carry short-term Notes in an amount not exceeding the accrued discount until the accrued discount is included in income.

Market Discount

If a U.S. holder purchases a Note (other than a short-term Note) for an amount that is less than its stated redemption price at maturity or, in the case of an original issue discount Note, its adjusted issue price (generally, the sum of its issue price and any previously accrued OID), the amount of the difference will be treated as market discount for U.S. federal income tax purposes, unless this difference is less than a specified *de minimis* amount, i.e., 1/4th of 1 percent of the stated redemption price at maturity multiplied by the number of complete years to maturity.

A U.S. holder will be required to treat any principal payment (or, in the case of an original issue discount Note, any payment that does not constitute qualified stated interest) on, or any gain on the sale, exchange, retirement or other disposition of a Note, including dispositions in certain nonrecognition transactions, as ordinary income to the extent of the market discount accrued on the Note at the time of the payment or disposition unless this market discount has been previously included in income by the U.S. holder pursuant to an election by the holder to include market discount in income as it accrues, or pursuant to a constant yield election by the holder as described under "*Taxation – United States Federal Income Taxation – Original Issue Discount*" above. In addition, the U.S. holder may be required to defer, until the maturity of the Note or its earlier sale, exchange, retirement, or other disposition (including certain

nontaxable transactions), the deduction of all or a portion of the interest expense on any indebtedness incurred or maintained to purchase or carry such Note.

If a U.S. holder makes a constant yield election (as described under "*Taxation – United States Federal Income Taxation – Original Issue Discount*") for a Note with market discount, such election will result in a deemed election for all debt instruments with market discount acquired by the holder on or after the first day of the first taxable year to which such election applies.

Acquisition Premium and Amortizable Bond Premium

A U.S. holder who purchases a Note for an amount that is greater than the Note's adjusted issue price but less than or equal to the sum of all amounts payable on the Note after the purchase date other than payments of qualified stated interest will be considered to have purchased the Note at an acquisition premium. Under the acquisition premium rules, the amount of original issue discount that the U.S. holder must include in its gross income with respect to the Note for any taxable year will be reduced by the portion of acquisition premium properly allocable to that year.

If a U.S. holder purchases a Note for an amount that is greater than the amount payable at maturity (defined to include all amounts payable on the Note after the purchase date through maturity other than payments of qualified stated interest), the holder will be considered to have purchased the Note with amortizable bond premium equal in amount to the excess of the purchase price over the amount payable at maturity. The holder may elect to amortize this premium, using a constant yield method, over the remaining term of the Note. If the Note may be redeemed at the Bank's option prior to maturity after the holder has acquired it, the amount of amortizable bond premium is determined by substituting the call date for the maturity date and the call price for the amount payable at maturity if the substitution results in a smaller amount of premium attributable to the period before the redemption date. A holder who elects to amortize bond premium must reduce his tax basis in the Note by the amount of the premium amortized in any year. An election to amortize bond premium applies to all taxable debt obligations then owned and thereafter acquired by the holder and may be revoked only with the consent of the IRS.

If a U.S. holder makes a constant yield election (as described under "*Taxation – United States Federal Income Taxation – Original Issue Discount*") for a Note with amortizable bond premium, such election will result in a deemed election to amortize bond premium for all of the holder's debt instruments with amortizable bond premium.

Sale, Exchange or Retirement of the Notes

Upon the sale, exchange, retirement, or other disposition of a Note, a U.S. holder will recognize taxable gain or loss equal to the difference between the amount realized on the sale, exchange, retirement, or other disposition and the holder's adjusted tax basis in the Note. A U.S. holder's adjusted tax basis in a Note generally will equal the acquisition cost of the Note increased by the amount of original issue discount and market discount included in the Holder's gross income and decreased by the amount of any payment received from the Bank other than a payment of qualified stated interest. Gain or loss, if any, will generally be U.S. source income for purposes of computing a U.S. holder's foreign tax credit limitation. For these purposes, the amount realized does not include any amount attributable to accrued interest or market discount on the Note. Amounts attributable to accrued interest are treated as interest as described under "*Taxation – United States Federal Income Taxation – Payments of Stated Interest*."

Except as described below, gain or loss realized on the sale, exchange, retirement, or other disposition of a Note will generally be capital gain or loss and will be long-term capital gain or loss if at the time of sale, exchange, retirement, or other disposition the Note has been held for more than one year. Exceptions to this general rule apply to the extent of any accrued market discount or, in the case of a short-term Note, to the extent of any accrued discount not previously included in the holder's taxable income. See "*Taxation– United States Federal Income Taxation – Original Issue Discount*" and "*– Market Discount*." In addition, other exceptions to this general rule apply in the case of foreign currency Notes. See "*Taxation – United States Federal Income Taxation – Foreign Currency Notes*."

Foreign Currency Notes

The following discussion summarizes certain U.S. federal income tax consequences to a U.S. holder of the ownership and disposition of Notes that are denominated in a specified currency other than the U.S. dollar or the payments of interest or principal on which are payable in a currency other than the U.S. dollar ("**foreign currency Notes**").

The rules applicable to foreign currency Notes could require some or all gain or loss on the sale, exchange, retirement, or other disposition of a foreign currency Note to be recharacterized as ordinary income or loss. The rules applicable to foreign currency Notes are complex and may depend on the holder's particular U.S. federal income tax situation. For example, various elections are available under these rules, and whether a holder should make any of these elections may depend on the holder's particular U.S. federal income tax situation. U.S. holders are urged to consult their own tax advisers regarding the U.S. federal income tax consequences of the ownership and disposition of foreign currency Notes.

A U.S. holder who uses the cash method of accounting and who receives a payment of qualified stated interest in a foreign currency with respect to a foreign currency Note will be required to include in income the U.S. dollar value of the foreign currency payment (determined on the date the payment is received) regardless of whether the payment is in fact converted to U.S. dollars at the time, and this U.S. dollar value will be the U.S. holder's tax basis in the foreign currency. A cash method holder who receives a payment of qualified stated interest in U.S. dollars pursuant to an option available under such Note will be required to include the amount of this payment in income upon receipt.

With respect to interest that must be included in a U.S. holder’s income on an accrual basis (including, for example, where the interest is original issue discount or the U.S. holder uses the accrual method of accounting), the U.S. holder will be required to include in income the U.S. dollar value of the amount of interest income (reduced by acquisition premium and amortizable bond premium, to the extent applicable) that has accrued and is otherwise required to be taken into account with respect to a foreign currency Note during an accrual period. The U.S. dollar value of the accrued income will be determined by translating the income at the average rate of exchange for the accrual period or, with respect to an accrual period that spans two taxable years, at the average rate for the partial period within the taxable year. Alternatively, the U.S. holder may elect to translate interest income (including original issue discount) into U.S. dollars at the spot rate on the last day of the interest accrual period (or, in the case of a partial accrual period, the spot rate on the last day of the taxable year) or, if the date of receipt is within five business days of the last day of the interest accrual period, the spot rate on the date of receipt. A U.S. holder that makes this election must apply it consistently to all debt instruments from year to year and cannot change the election without the consent of the IRS. The U.S. holder will recognize ordinary income or loss with respect to accrued interest income on the date the income is actually received. The amount of ordinary income or loss recognized will equal the difference between the U.S. dollar value of the foreign currency payment received (determined on the date the payment is received) in respect of the accrual period (or, where a holder receives U.S. dollars, the amount of the payment in respect of the accrual period) and the U.S. dollar value of interest income that has accrued during the accrual period (as determined above).

Original issue discount, market discount, acquisition premium and amortizable bond premium on a foreign currency Note are to be determined in the relevant foreign currency. Where the U.S. holder elects to include market discount in income currently, the amount of market discount will be determined for any accrual period in the relevant foreign currency and then translated into U.S. dollars on the basis of the average rate in effect during the accrual period. Exchange gain or loss realized with respect to such accrued market discount shall be determined in accordance with the rules relating to accrued interest described above.

If an election to amortize bond premium is made, amortizable bond premium taken into account on a current basis shall reduce interest income in units of the relevant foreign currency. Exchange gain or loss is realized on amortized bond premium with respect to any period by treating the bond premium amortized in the period in the same manner as on the sale, exchange, retirement, or other disposition of the foreign currency Note. Any exchange gain or loss will be ordinary income or loss as described below. If the election is not made, any loss realized on the sale, exchange, retirement, or other disposition of a foreign currency Note with amortizable bond premium by a U.S. holder who has not elected to amortize the premium will be a capital loss to the extent of the bond premium.

A U.S. holder's tax basis in a foreign currency Note, and the amount of any subsequent adjustment to the holder's tax basis, will be the U.S. dollar value amount of the foreign currency amount paid for such foreign currency Note, or of the foreign currency amount of the adjustment, determined on the date of the purchase or adjustment. A U.S. holder who purchases a foreign currency Note with previously owned foreign currency will recognize ordinary income or loss in an amount equal to the difference, if any, between such U.S. holder's tax basis in the foreign currency and the U.S. dollar fair market value of the foreign currency Note on the date of purchase.

Gain or loss realized upon the sale, exchange, retirement, or other disposition of a foreign currency Note that is attributable to fluctuations in currency exchange rates will be ordinary income or loss which will not be treated as interest income or expense. Gain or loss attributable to fluctuations in exchange rates will equal the difference between (i) the U.S. dollar value of the foreign currency principal amount of the Note, determined on the date the payment is received or the Note is disposed of, and (ii) the U.S. dollar value of the foreign currency principal amount of the Note, determined on the date the U.S. holder acquired the Note. Payments received attributable to accrued interest will be treated in accordance with the rules applicable to payments of interest on foreign currency Notes described above. The foreign currency gain or loss will be recognized only to the extent of the total gain or loss realized by the holder on the sale, exchange, retirement, or other disposition of the foreign currency Note. The source of the foreign currency gain or loss will be determined by reference to the residence of the holder or the "qualified business unit" of the holder on whose books the Note is properly reflected. Any gain or loss realized by these holders in excess of the foreign currency gain or loss will be capital gain or loss except to the extent of any accrued market discount or, in the case of a short-term Note, to the extent of any discount not previously included in the holder's income. Holders should consult their own tax adviser with respect to the tax consequences of receiving payments in a currency different from the currency in which payments with respect to such Note accrue.

A U.S. holder will have a tax basis in any foreign currency received on the sale, exchange, retirement, or other disposition of a foreign currency Note equal to the U.S. dollar value of the foreign currency, determined at the time of sale, exchange, retirement, or other disposition. A U.S. holder that is a cash method taxpayer who buys or sells a foreign currency Note is required to translate units of foreign currency paid or received into U.S. dollars at the spot rate on the settlement date of the purchase or sale. Accordingly, no exchange gain or loss will result from currency fluctuations between the trade date and the settlement date of the purchase or sale. A U.S. holder that is an accrual method taxpayer may elect the same treatment for all purchases and sales of foreign currency obligations provided that the Notes are traded on an established securities market. This election cannot be changed without the consent of the IRS. Any gain or loss realized by a U.S. holder on a sale or other disposition of foreign currency (including its exchange for U.S. dollars or its use to purchase foreign currency Notes) will be ordinary income or loss.

Backup Withholding and Information Reporting

Information returns may be filed with the IRS in connection with payments on the Notes and the proceeds from a sale, exchange, retirement, or other disposition of the Notes. A U.S. holder may be subject to U.S. backup withholding on these payments if it fails to provide its tax identification number to the paying agent and comply with certain certification procedures or otherwise establish an exemption from backup withholding. The amount of any backup withholding from a payment to a U.S. holder will be allowed as a credit against the holder's U.S. federal income tax liability and may entitle them to a refund, provided that the required information is furnished to the IRS.

Additionally, individual U.S. holders may be required to report to the IRS certain information with respect to their beneficial ownership of the Notes. Investors who fail to report required information could be subject to substantial penalties. Certain information reporting requirements are described more fully below under "*Taxation — United States Federal Income Taxation — Information with Respect to Foreign Financial Assets*" and "*— Reportable Transactions.*"

Information with Respect to Foreign Financial Assets

Owners of "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 their tax returns. "Specified foreign financial assets" include any 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-U.S. persons, (ii) financial instruments and contracts that have non-United States issuers or counterparties, and (iii) interests in foreign entities. The Notes may be subject to these rules. Holders are urged to consult their tax advisors regarding the application of these rules to their ownership of the Notes.

Reportable Transactions

A U.S. holder that participates in a "reportable transaction" will be required to disclose its participation to the IRS. The scope and application of these rules is not entirely clear. A U.S. holder may be required to treat a foreign currency exchange loss from the Notes as a reportable transaction if the loss exceeds $50,000 in a single taxable year

if the U.S. holder is an individual or trust, or higher amounts for other U.S. holders. In the event the acquisition, ownership or disposition of Notes constitutes participation in a "reportable transaction" for purposes of these rules, a U.S. holder will be required to disclose its investment by filing Form 8886 with the IRS. Prospective purchasers should consult their tax advisers regarding the application of these rules to the acquisition, ownership or disposition of Notes.

Foreign Account Tax Compliance Act

FATCA imposes a reporting regime and a 30% withholding tax with respect to certain payments to any non-U.S. financial institution (a "**foreign financial institution**," or "**FFI**" (as defined by FATCA)) that does not become a "**Participating FFI**" by entering into an agreement with the IRS to, among other things, 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.

This withholding regime will apply to "foreign passthru payments" (a term not yet defined) no earlier than the date that is two years after the date on which final U.S. Treasury regulations defining the term foreign passthru payment are published in the Federal Register. In the case of "foreign passthru payments," this withholding would potentially apply to payments in respect of any Notes that are not "grandfathered obligations." A grandfathered obligation includes any obligation that is executed on or before the date that is six months after the date on which final U.S. Treasury regulations defining the term foreign passthru payment are filed with the Federal Register, and such obligation is not materially modified after such date. If any Notes are treated as grandfathered obligations, and additional Notes of the same series issued later in time are not treated as grandfathered obligations, there may be negative consequences for the existing earlier issued Notes, including a negative impact on market price.

If an amount in respect of FATCA withholding were to be deducted or withheld from interest, principal or other payments made in respect of the Notes, neither the Bank nor any paying agent nor any other person would be required to pay additional amounts as a result of the deduction or withholding. As a result, investors may receive less interest or principal than expected.

The U.S. federal income tax discussion set forth above is included for general information only and may not be applicable depending upon your particular situation. You should consult your own tax advisers with respect to the tax consequences to you of the acquisition, ownership and disposition of the Notes, including the tax consequences under U.S. state and local, non-U.S., and other tax laws and the possible effects of changes in U.S. federal or other tax laws.

ERISA AND CERTAIN OTHER U.S. BENEFIT PLAN CONSIDERATIONS

The U.S. Employee Retirement Income Security Act of 1974, as amended ("**ERISA**"), imposes certain requirements on "employee benefit plans" (as defined in Section 3(3) of ERISA) subject to ERISA, including entities such as collective investment funds and separate accounts whose underlying assets include the assets of such plans (collectively, "**ERISA Plans**") and on those persons who are fiduciaries with respect to ERISA Plans. Each fiduciary of an ERISA 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.

Section 406 of ERISA and Section 4975 of the U.S. Internal Revenue Code of 1986, as amended (the "**Code**"), prohibit certain transactions involving the assets of an ERISA Plan (as well as those plans that are not subject to ERISA but which are subject to Section 4975 of the Code, such as individual retirement accounts and entities whose underlying assets include the assets of such plans (together with ERISA Plans, "**Plans**")) and certain persons (referred to as "**parties in interest**" or "**disqualified persons**") having certain relationships to such Plans, unless a statutory or administrative exemption is applicable to the transaction. Prohibited transactions within the meaning of Section 406 of ERISA or Section 4975 of the Code may arise if any Notes are acquired by a Plan with respect to which any of the Bank, the Guarantor, the Trustee, the Agents or any of their respective affiliates are a party in interest or a disqualified person. 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.

Certain exemptions from the prohibited transaction provisions of Section 406 of ERISA and Section 4975 of the Code may be applicable, however, depending in part on the type of Plan fiduciary making the decision to acquire Notes and the circumstances under which such decision is made. Those exemptions include prohibited transaction class exemption ("**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), and PTCE 84-14 (for certain transactions determined by independent qualified asset managers). In addition, Section 408(b)(17) of ERISA and Section 4975(d)(20) of the Code provide a statutory exemption for certain transactions with a person that is a party in interest or disqualified person solely by reason of providing services to Plans or being an affiliate of such a service provider (the "**Service Provider Exemption**").

There can be no assurance that any exemption will be available with respect to any particular transaction involving the Notes, or that, if an exemption is available, it will cover all aspects of any particular transaction.

Because the Bank, the Guarantor, the Trustee, the Agents, or any of their respective affiliates 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, unless such purchase, holding or disposition is eligible for exemptive relief under an applicable statutory, class or individual prohibited transaction exemption, including relief available under PTCE 96-23, 95-60, 91-38, 90-1, or 84-14 or the Service Provider Exemption.

Governmental plans (as defined in Section 3(32) of ERISA), while not subject to the fiduciary responsibility provisions of ERISA or the provisions of Section 4975 of the Code, may nevertheless be subject to local, state or other laws that are substantially similar to Title I of ERISA or Section 4975 of the Code ("**Similar Law**"). Governmental and certain church plans are also subject to the prohibited transaction rules in Section 503(b) of the Code. Fiduciaries of any such plans should consult with their counsel before purchasing any Notes.

By its purchase of any Notes (or any interest in a Note), each purchaser (whether in the case of the initial purchase or in the case of a subsequent transferee) will be deemed to have represented and agreed that either (i) it is not and for so long as it holds a Note (or any interest therein) will not be a Plan or a plan subject to Similar Law, or (ii) its acquisition, holding and disposition of the Notes will not, in the case of a Plan, constitute or result in a non-exempt prohibited transaction under Section 406 of ERISA or Section 4975 of the Code because the conditions for relief under an applicable statutory, class or individual prohibited transaction exemption are satisfied or, in the case of a plan subject to Similar Law, will not result in a violation of any such Similar Law.

The foregoing discussion is general in nature and not intended to be all-inclusive. If you are a Plan or other plan fiduciary who proposes to cause a Plan or other plan to purchase any Notes, you should consult with your counsel

and other advisers regarding the applicability of the fiduciary responsibility and prohibited transaction provisions of ERISA and Section 4975 of the Code and Similar Law to such an investment, and to confirm that such investment will not constitute or result in a prohibited transaction or any other violation of an applicable requirement of ERISA, the Code or Similar Law. The sale of Notes to a Plan or other plan is in no respect a representation by the Bank, the Guarantor, the Trustee or the Agents that such an investment meets all relevant requirements with respect to investments by Plans or other plans generally or any particular Plan or other plan, or that such an investment is appropriate for Plans or other plans generally or any particular Plan or other plan.

PLAN OF DISTRIBUTION AND CONFLICTS OF INTEREST

The Notes being offered pursuant to this Offering Circular are being offered on a periodic basis for sale by the Bank and the Guarantor through NBCFI and each Agent appointed from time to time by the Bank and the Guarantor under and in accordance with the terms of the Distribution Agreement, dated June 9, 2020, as it may be amended or supplemented from time to time (the "Distribution Agreement"). The Bank and the Guarantor will pay the applicable Agent a commission which will equal the percentage of the principal amount of any such Note sold through such Agent. The Bank and the Guarantor may sell Notes to an Agent, as principal, at a discount from the principal amount thereof, and such Agent may later resell such Notes to investors and other purchasers at varying prices related to prevailing market prices at the time of sale as determined by such Agent. The Bank and the Guarantor may also sell Notes directly to, and may solicit and accept offers to purchase directly from, investors on their own behalf in those jurisdictions where they are authorized to do so. The Notes being offered pursuant to this Offering Circular will be offered in accordance with the provisions of the Distribution Agreement.

In addition, the Agents may offer the Notes they have purchased as principal to other Agents. The Agents may sell Notes to any Agent at a discount. Unless otherwise indicated in the applicable Supplement, any Note sold to an Agent as principal will be purchased by such Agent at a price equal to 100% of the principal amount thereof less a percentage equal to the commission applicable to any agency sale of a Note of identical term, and may be resold by such Agent to investors and other purchasers from time to time in one or more transactions, including negotiated transactions, at a fixed public offering price or at varying prices determined at the time of sale or may be resold to certain dealers as described above. After the initial offering of Notes to be resold to investors and other purchasers on a fixed offering price basis, the offering price, concession and discount may be changed.

NBCFI, a broker-dealer affiliate of the Bank, is a member of the FINRA. If NBCFI participates as Agent in the distribution of certain Notes, offerings of those Notes will conform to the requirements of Rule 5121 applicable to FINRA members, and NBCFI may not make sales of those Notes to any of its discretionary accounts without the prior written approval of the account holder.

The Bank and the Guarantor reserve the right to withdraw, cancel or modify the offer made hereby without notice and may reject orders in whole or in part whether placed directly with the Bank and the Guarantor or through an Agent. Each Agent will have the right, in its discretion reasonably exercised, to reject any offer to purchase Notes received by it, in whole or in part.

In connection with an offering of Notes purchased by one or more Agents as principal on a fixed offering price basis, such Agent(s) will be permitted to over-allot or engage in transactions that stabilize the price of Notes. These transactions may consist of bids or purchases for the purpose of pegging, fixing or maintaining the price of Notes. If the Agent creates or the Agents create, as the case may be, a short position in Notes, that is, if it sells or they sell Notes in an aggregate principal amount exceeding that set forth in the applicable Supplement, such Agent(s) may reduce that short position by purchasing Notes in the open market. In general, purchases of Notes for the purpose of stabilization or to reduce a short position could cause the price of Notes to be higher than it might be in the absence of such purchases. Such stabilization if commenced, may be discontinued at any time and must be brought to an end after a limited period. Such stabilization, if any, shall be in compliance with all laws.

The Agents may impose a penalty bid. This occurs when a particular Agent repays to the Agents a portion of the commission received by it because the other Agents have repurchased Notes sold by or for the account of such Agent in stabilizing or short covering transactions.

None of the Bank, the Guarantor or any of the Agents makes any representation or prediction as to the direction or magnitude of any effect that the transactions described in the immediately preceding paragraph may have on the price of Notes. In addition, none of the Bank, the Guarantor or any of the Agents make any representation that the Agents will engage in any such transactions or that such transactions, once commenced, will not be discontinued without notice.

The Agents may from time to time purchase and sell Notes in the secondary market, but they are not obligated to do so, and there can be no assurance that there will be a secondary market for the Notes or liquidity in the secondary market if one develops. From time to time, the Agents may make a market in the Notes.

The Bank may use this Offering Circular in the initial sale of any Note. In addition, NBCFI or any other affiliate of the Bank may use this Offering Circular in a market-making transaction in any Note after its initial sale. This Offering Circular will be used in a market-making transaction unless the Bank or its Agent informs the purchaser otherwise in a confirmation of sale.

Each Agent participating in the offering of the Notes will represent and agree that it will comply with all applicable laws and regulations in force in any jurisdiction in which it purchases, offers, sells, or delivers the securities or possesses or distributes the applicable Supplement or this Offering Circular and will obtain any consent, approval, or permission required by it for the purchase, offer, or sale by it of the securities under the laws and regulations in force in any jurisdiction to which it is subject to in which it makes purchase, offers, or sales of the securities, and the Bank shall not have responsibility for the Agent's compliance with the applicable laws and regulations or obtaining any required consent, approval, or permission. The Bank and the Guarantor have agreed to indemnify the several Agents against and to make contributions relating to certain liabilities, including liabilities under the Securities Act.

The Agents and their respective affiliates are full service financial institutions engaged in various activities, which may include securities trading, commercial and investment banking, financial advisory, investment management, principal investment, hedging, financing and brokerage activities. In the ordinary course of their various business activities, the Agents and their respective affiliates may make or hold a broad array of investments and actively trade debt and equity securities (or related derivative securities) and financial instruments (which may include bank loans and/or credit default swaps) for their own account and for the accounts of their customers and may at any time hold long and short positions in such securities and instruments. Such investments and securities activities may involve securities and/or instruments of ours or our affiliates. In addition, certain of the Agents and their affiliates have engaged, and may in the future engage, in investment banking and/or commercial banking transactions with, and may perform services for, the Bank in the ordinary course of business without regard to the Bank, the Guarantor, the Trustee or the holders of the Notes. Certain of the Agents or their respective affiliates that have a lending relationship with us routinely hedge their credit exposure to us consistent with their customary risk management policies. A typical such hedging strategy would include these Agents or their respective affiliates hedging 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. The Agents and their respective 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.

Selling Restrictions

The selling restrictions below may be modified by the agreement of the Bank and the Guarantor and the relevant Agents, including following a change in a relevant law, regulation or directive. Any such modification will be set out in a Supplement issued in respect of the issue of Notes to which it relates. No action has been taken in any country or jurisdiction by the Bank, the Guarantor or the Agents that would permit a public offering of any of the Notes, or possession of distribution of any offering material in relation thereto, in any country or jurisdiction where action for that purpose is required.

Each Agent has agreed and each further Agent appointed by the Bank and the Guarantor will be required to agree (to the best of its knowledge and belief) to comply with all applicable securities laws and regulations in each jurisdiction in which it purchases, offers, sells or delivers Notes or has in its possession or distributes the Offering Circular or any other offering material, in all cases at its own expense.

Persons into whose hands the Offering Circular, any Supplement or other offering materials in respect of the Notes comes are, and each Noteholder is, required by the Bank, the Guarantor and the Agents to comply with all applicable laws and regulations in each country or jurisdiction in or from which they purchase, offer, sell or deliver Notes or have in their possession or distribute such offering material, in all cases at their own expense.

Canada

The Bank confirms that the Notes may be offered, sold or distributed by National Bank of Canada Financial Inc., or other Agents if approved by the Bank, in each case in such provinces of Canada as are agreed with the Bank and in compliance with any applicable securities laws in Canada. Each Agent (other than National Bank of Canada

Financial Inc.) has represented and agreed that it will not, directly or indirectly, offer, sell or deliver, any of the Notes in or from Canada or to any resident in Canada without the consent of the Bank.

Each Agent has agreed not to distribute or deliver this Offering Circular, or any other offering material relating to the Notes, in Canada in contravention of the securities laws of Canada or any province or territory thereof.

United States of America

Purchasers of Notes in the United States are advised to consult legal counsel prior to making any purchase, offer, sale, resale, pledge or other transfer of Notes.

The Notes have not been registered with the SEC under the Securities Act and are offered and sold pursuant to an exemption from registration under Section 3(a)(2) of the Securities Act.

Each purchaser of the Notes or person wishing to acquire an interest in a Global Note will be required to acknowledge, represent and agree as follows:

(a) that either (i) it is not and for so long as it holds a Note (or any interest therein) will not be a Plan or a plan subject to Similar Law, or (ii) its acquisition, holding and disposition of the Notes will not, in the case of a Plan, constitute or result in a non-exempt prohibited transaction under Section 406 of ERISA or Section 4975 of the Code because the conditions for relief under an applicable statutory, class or individual prohibited transaction exemption are satisfied or, in the case of such a plan subject to Similar Law, will not result in a violation of any such Similar Law; and

(b) that the Bank and others will rely upon the truth and accuracy of the foregoing acknowledgements, representations and agreements and agrees that if any of such acknowledgements, representations or agreements made by it are no longer accurate, it shall promptly notify the Bank; and if it is acquiring any Notes as a fiduciary or agent for one or more accounts it represents that it has sole investment discretion with respect to each such account and that it has full power to make the foregoing acknowledgements, representations and agreements on behalf of each such account.

European Economic Area

Each Agent has represented and agreed that it has not offered, sold or otherwise made available and will not offer, sell or otherwise make available the Notes to any retail investor in the European Economic Area or in the United Kingdom. Consequently no key information document required by the PRIIPs Regulation for offering or selling the Notes or otherwise making the Notes available to retail investors in the European Economic Area has been prepared and therefore offering or selling the Notes or otherwise making them available to any retail investor in the European Economic Area or in the United Kingdom may be unlawful under the PRIIPs Regulation. For the purposes of this provision:

(a) the expression "retail investor" means a person who is one (or more) of the following:

  (i) a retail client as defined in point (11) of Article 4(1) of Directive 2014/65/EU (as amended, "**MiFID II**"); or

  (ii) a customer within the meaning of Directive (EU) 2016/97 (as amended or superseded) 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 Regulation (EU) 2017/1129 (the "**Prospectus Regulation**");

(b) 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

(c) the expression "PRIIPs Regulation" means Regulation (EU) No 1286/2014.

Each person in a Member State or in the United Kingdom who receives any communication in respect of, or who acquires any Notes under, the offers contemplated by this Offering Circular and the applicable Supplement will be deemed to have represented, warranted and agreed to and with each Agent and the Bank that: (i) it and any person on whose behalf it acquires the Notes is a Qualified Investor and (ii) it is not a retail investor (as described above).

References to Regulations or Directives include, in relation to the United Kingdom, those Regulations or Directives as they form part of United Kingdom domestic law by virtue of the European Union (Withdrawal) Act 2018 or have been implemented in United Kingdom domestic law, as appropriate.

Selling Restrictions addressing additional United Kingdom Securities Laws

Each Agent has represented, warranted and agreed that:

(a) 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 Guarantor or, in the case of the Bank, would not, if the Bank was not an authorized person, apply to the Bank; and

(b) it has complied and will comply with all applicable provisions of the FSMA with respect to anything done by it in relation to any Notes in, from or otherwise involving the United Kingdom.

Hong Kong

In relation to Notes issued by the Bank, each Agent has represented and agreed that

(a) it has not offered or sold and will not offer or sell in the Hong Kong Special Administrative Region of the People's Republic of China ("**Hong Kong**"), by means of any document, any Notes (except for Notes which are a "structured product" as defined in the Securities and Futures Ordinance (Cap. 571) of Hong Kong (the "**SFO**")) other than (i) to "professional investors" as defined in the SFO and any rules made under the SFO, or (ii) in other circumstances which do not result in the document being a "prospectus" as defined in the Companies (Winding Up and Miscellaneous Provisions) Ordinance (Cap. 32) of Hong Kong (the "**CO**") or which do not constitute an offer to the public within the meaning of the CO; and

(b) it has not issued or had in its possession for the purposes of issue, and will not issue or have in its possession for the purposes of issue, whether in Hong Kong or elsewhere, any advertisement, invitation, or document relating to the Notes, which is directed at, or the contents of which are likely to be accessed or read by, the public in Hong Kong (except if permitted to do so under the securities laws of Hong Kong) other than with respect to the Notes that are or are intended to be disposed of (i) only to persons outside Hong Kong or (ii) only to "professional investors" as defined in the SFO and any rules made under the SFO.

Japan

The Notes have not been and will not be registered under the Financial Instruments and Exchange Act of Japan (Law No. 25 of 1948, as amended, the "**FIEA**") and each Agent has represented and agreed that it will not offer or sell any Notes, directly or indirectly, in Japan or to, or for the benefit of, any resident of Japan (as defined under Item 5, Paragraph 1, Article 6 of the Foreign Exchange and Foreign Trade Control Law (Law No. 228 of 1949, as amended)), or to others for re-offering or resale, directly or indirectly, in Japan or to, or for the benefit of, a resident of Japan, except pursuant to an exemption from the registration requirements of, and otherwise in compliance with, the FIEA and any other applicable laws, regulations and ministerial guidelines of Japan.

Singapore

Each Agent has represented and agreed, and each additional Agent appointed under the Program will be required to represent and agree, that this Offering Circular has not been registered as a prospectus with the Monetary Authority of Singapore. Accordingly, each Agent has represented and agreed, and each additional Agent appointed under the Program will be required to represent and agree, that it has not offered or sold any Notes or caused the Notes

to be made the subject of an invitation for subscription or purchase, and has not circulated or distributed, nor will it circulate or distribute, this Offering Circular or any other document or material in connection with the offer or sale, or invitation for subscription or purchase, of any Notes, whether directly or indirectly, to any person in Singapore other than (a) to an institutional investor pursuant to Section 274 of the Securities and Futures Act, Chapter 289 of Singapore (the "**Securities and Futures Act**"), (b) to a relevant person under Section 275(1) of the Securities and Futures Act or to any person pursuant to Section 275(1A) of the Securities and Futures Act and in accordance with the conditions specified in Section 275 of the Securities and Futures Act, or (c) otherwise pursuant to, and in accordance with the conditions of, any other applicable provision of the Securities and Futures Act.

Where the Notes are subscribed or purchased under Section 275 of the Securities and Futures Act by a relevant person which is:

(a) a corporation (which is not an accredited investor (as defined in Section 4A of the Securities and Futures Act)) the sole business of which is to hold investments and the entire share capital of which is owned by one or more individuals, each of whom is an accredited investor; or

(b) a trust (where the trustee is not an accredited investor) whose sole purpose is to hold investments and each beneficiary of the trust is an individual who is an accredited investor,

securities or securities-based derivatives contracts (each term as defined in Section 2(1) of the Securities and Futures Act) of that corporation or the beneficiaries' rights and interest (howsoever described) in that trust shall not be transferable for 6 months after that corporation or that trust has acquired the Notes pursuant to an offer under Section 275 of the Securities and Futures Act except:

(i) to an institutional investor under Section 274 or to a relevant person pursuant to Section 275(1A) of the Securities and Futures Act and in accordance with the conditions specified in Section 275of the Securities and Futures Act; or

(ii) where no consideration is or will be given for the transfer;

(iii) where the transfer is by operation of law

(iv) as specified in Section 276(7) of the Securities and Futures Act; or

(v) as specified in Regulation 37A of the Securities and Futures (Offers of Investments) (Securities and Securities-based Derivatives Contracts) Regulations 2018.

Singapore Securities and Futures Act Product Classification – Solely for the purposes of its obligations pursuant to sections 309B(1)(a) and 309B(1)(c) of the SFA, the Bank has determined, and hereby notifies all relevant persons (as defined in Section 309A of the SFA) that the Notes are prescribed capital markets products (as defined in Section 309B(10) of the SFA) and excluded investment products (as defined in MAS Notice SFA 04-N12: Notice on the Sale of Investment Products and MAS Notice FAA-N16: Notice on Recommendations on Investment Products).

Switzerland

This Offering Circular does not constitute an issue prospectus pursuant to Article 652a or Article 1156 of the Swiss Code of Obligations and the Notes will not be listed on the SIX Swiss Exchange. Therefore, this Offering Circular may not comply with the disclosure standards of the listing rules (including any additional listing rules or prospectus schemes) of the SIX Swiss Exchange. Accordingly, the Notes may not be offered to the public in or from Switzerland, but only to a selected and limited circle of investors who do not subscribe to the Notes with a view to distribution. Any such investors will be individually approached by the Agents from time to time.

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.

INDEPENDENT AUDITOR AND PRESENTATION OF FINANCIAL RESULTS

The consolidated financial statements of the Bank as of October 31, 2019 and 2018 and for the years ended October 31, 2019 and 2018 incorporated by reference into this Offering Circular have been audited by Deloitte LLP, our independent auditor, as stated in their report incorporated by reference therein.

Unless the context otherwise requires, references herein to "2019," when used in connection with a discussion of our 2019 Annual Report, means our fiscal year ended October 31, 2019. We refer to prior fiscal years in a corresponding manner.

The audited consolidated financial statements contained in our 2019 Annual Report and the unaudited interim condensed consolidated financial statements contained in our 2020 Second Quarterly Report were prepared in accordance with International Financial Reporting Standards issued by the International Accounting Standards Board ("**IFRS**"). IFRS differs in certain respects from U.S. Generally Accepted Accounting Principles.

Due to rounding, the numbers presented throughout this Offering Circular may not add up precisely, and percentages may not precisely reflect absolute figures.

LEGAL MATTERS

The validity of the Notes under New York law will be passed upon for us by our United States counsel, Mayer Brown LLP, New York, New York. McCarthy Tétrault LLP, Montréal, Québec will pass upon certain matters for us under Canadian law.

Up to U.S.$3,500,000,000 Structured Notes

unconditionally and irrevocably guaranteed as to payments by
NATIONAL BANK OF CANADA, NEW YORK BRANCH

OFFERING CIRCULAR

June 9, 2020