



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

Pricing Supplement

Dated October 13, 2023

To the Product Prospectus Supplement FIN-1, the Prospectus Supplement and the Prospectus, each dated September 14, 2021

\$115,750,000

Fixed to Floating Rate Notes,
Due October 17, 2026
Royal Bank of Canada

Royal Bank of Canada is offering the Fixed to Floating Rate Notes (the "Notes") described in this document.

The CUSIP number for the Notes is 78014RQU7.

The Notes will pay interest quarterly on the 17th day of each January, April, July and October, commencing on January 17, 2024, and ending on the Maturity Date.

The "Reference Rate" is compounded SOFR, calculated as described in this document. The Notes will accrue interest at the following rates during the indicated years of their term:

- from and including the issue date to, but excluding October 17, 2024: 7.00% per annum
- from and including October 17, 2024 to, but excluding the maturity date: the Reference Rate + a Spread of 0.90% (subject to a Coupon Floor of 0.00%)

The Notes will not be listed on any securities exchange.

Investing in the Notes involves a number of risks. See "Additional Risk Factors" on page P-6 of this pricing supplement, "Additional Risk Factors Specific to the Notes" beginning on page PS-5 of the product prospectus supplement FIN-1 dated September 14, 2021 and "Risk Factors" beginning on page S-2 of the prospectus supplement dated September 14, 2021.

The Notes will not constitute deposits insured by the Canada Deposit Insurance Corporation, the U.S. Federal Deposit Insurance Corporation or any other Canadian or U.S. government agency or instrumentality.

The Notes will be bail-inable notes (as defined in the accompanying prospectus supplement dated September 14, 2021) 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 Ontario and the federal laws of Canada applicable therein in respect of the operation of the CDIC Act with respect to the Notes.

Neither the Securities and Exchange Commission (the "SEC") nor any state securities commission has approved or disapproved of these securities or determined that this pricing supplement is truthful or complete. Any representation to the contrary is a criminal offense.

The Notes will initially be offered to investors at a price equal to 100% of the principal amount. RBC Capital Markets, LLC ("RBCCM") will not receive an underwriting discount in connection with its offering of the Notes. See "Supplemental Plan of Distribution (Conflicts of Interest)" below.

We will deliver the Notes in book-entry only form through the facilities of The Depository Trust Company on October 17, 2023, against payment in immediately available funds.

SUMMARY

The information in this “Summary” section is qualified by the more detailed information set forth in this pricing supplement, the product prospectus supplement FIN-1, the prospectus supplement, and the prospectus.

Issuer:	Royal Bank of Canada (the “Bank”)
Underwriter:	RBC Capital Markets, LLC
Currency:	U.S. Dollars
Minimum Investment:	\$1,000 and minimum denominations of \$1,000 in excess of \$1,000
Pricing Date:	October 13, 2023
Issue Date:	October 17, 2023
Maturity Date:	October 17, 2026
Interest Rate:	From and including the issue date to, but excluding October 17, 2024: 7.00% per annum From and including October 17, 2024 to, but excluding the maturity date (the “Floating Rate Period”): the Reference Rate + the Spread (subject to a Coupon Floor of 0.00%)
Reference Rate:	The Reference Rate will be compounded SOFR, calculated as described in this document, plus the Spread.
Coupon Floor:	0.00%
Spread:	0.90%
Day Count Fraction:	30/360
Type of Note:	Fixed to Floating Rate Notes
Interest Payment Dates:	Quarterly, on the 17th day of each January, April, July and October, commencing January 17, 2024, and ending on the Maturity Date. If any Interest Payment Date is not a New York business day, interest will be paid on the next New York business day, without adjustment for period end dates and no additional interest will be paid in respect of the postponement.
Interest Period:	Each period from and including an Interest Payment Date (or, for the first period, the issue date) to but excluding the next following Interest Payment Date.
Interest Determination Dates During Floating Rate Period:	Five U.S. Government Securities Business Days prior to the applicable Interest Payment Date. A “U.S. Government Securities Business Day” is any day except for a Saturday, a 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.

Compounded SOFR: During the Floating Rate Period, interest on the Notes will be determined based on the daily compounding of interest, with the daily SOFR used for the calculation of interest.

The interest payable on the Notes will be calculated by the Calculation Agent on each relevant Interest Determination Date occurring prior to the applicable Interest Payment Date as follows. The resulting percentage will be rounded if necessary to the fifth decimal place, with 0.000005 being rounded upwards:

$$\left[\prod_{i=1}^{d_o} \left(1 + \frac{SOFR_{i-5\text{ USBD}} \times n_i}{360} \right) - 1 \right] \times \frac{360}{d}$$

Where:

“d” is the number of calendar days in the relevant interest period;

“d_o” is the number of U.S. Government Securities Business Days in the relevant Observation Period;

“i” is a series of whole numbers from one to d_o, each representing the relevant U.S. Government Securities Business Day in chronological order from, and including, the first U.S. Government Securities Business Day in the relevant Observation Period;

“n_i”, for any U.S. Government Securities Business Day “i”, means the number of calendar days from, and including, such U.S. Government Securities Business Day “i” up to, but excluding, the following U.S. Government Securities Business Day;

“Observation Period” means the period from, and including, the date falling five U.S. Government Securities Business Days prior to the first day of the relevant interest period to (but excluding) the date falling five U.S. Government Securities Business Days prior to last day included in the relevant interest period;

“SOFR reference rate,” in respect of any U.S. Government Securities Business Day is a reference rate equal to the daily secured overnight financing (“SOFR”) rate for that day, as provided by the Federal Reserve Bank of New York, as the administrator of such rate (or any successor administrator of such rate) on the website of the Federal Reserve Bank of New York currently at www.newyorkfed.org, or any successor website of the Federal Reserve Bank of New York (in each case, on or about 5:00 p.m., New York City time, on the U.S. Government Securities Business Day immediately following that day); provided, however, if that rate is not available at or around the indicated time on such date (and a Benchmark Transition Event and its related Benchmark Replacement Date (each as defined below) have not occurred), the SOFR reference rate for the applicable U.S. Government Securities Business Day will be the SOFR rate in respect of the last U.S. Government Securities Business Day for which such rate was published on the Federal Reserve Bank of New York’s website; and

“SOFR_{i-5USBD}” means, in respect of any U.S. Government Securities Business Day “i”, the SOFR reference rate for the U.S. Government Securities Business Day falling five U.S. Government Securities Business Days prior to the relevant U.S. Government Securities Business Day “i”.

Redemption: Not Applicable.

Survivor's Option:	Not Applicable.
Calculation Agent:	RBC Capital Markets, LLC
Listing:	The Notes will not be listed on any securities exchange.
Clearance and Settlement:	DTC global (including through its indirect participants Euroclear and Clearstream, Luxembourg as described under "Ownership and Book-Entry Issuance" in the prospectus).
U.S. Tax Treatment:	<p>In the opinion of our special U.S. tax counsel, Ashurst LLP, based on market conditions as of the date of this pricing supplement, it would generally be reasonable to treat the Notes as variable rate debt instruments providing for stated interest at a single fixed rate and a qualified floating rate for U.S. federal income tax purposes. If the Notes are treated as providing for stated interest at a single fixed rate and a qualified floating rate, based on market conditions as of the date of this pricing supplement, we expect the Notes will be issued with more than de minimis original issue discount ("OID"). If the Notes are determined to be issued with more than de minimis OID, U.S. holders will be required to include OID in income for U.S. federal income tax purposes as it accrues, in accordance with a constant yield method based on compounding of interest. Information regarding the determination of OID, if any on the Notes may be obtained by contacting RBC Capital Markets, LLC toll free at 1-877-688-2301.</p> <p>Please see the discussion in the accompanying product prospectus supplement FIN-1 dated September 14, 2021 under the section entitled "Supplemental Discussion of U.S. Federal Income Tax Consequences," and the accompanying prospectus dated September 14, 2021 under the section entitled "Tax Consequences—United States Taxation" and specifically the discussion in the accompanying prospectus under the section entitled "Tax Consequences—United States Taxation—Original Issue Discount—Variable Rate Debt Securities," and "Tax Consequences—United States Taxation—Purchase, Sale and Retirement of the Debt Securities", which apply to your Notes.</p>
Terms Incorporated in the Master Note:	All of the terms appearing above the item captioned "Listing" on pages P-2 and P-3 of this pricing supplement, the section below, "Effect of Benchmark Transition Event on SOFR," and the applicable terms appearing under the caption "General Terms of the Notes" in the product prospectus supplement FIN-1, as modified by this pricing supplement.

ADDITIONAL TERMS OF YOUR NOTES

You should read this pricing supplement together with the prospectus dated September 14, 2021, as supplemented by the prospectus supplement dated September 14, 2021 and the product prospectus supplement FIN-1 dated September 14, 2021, relating to our Senior Global Medium-Term Notes, Series I, of which these Notes are a part. Capitalized terms used but not defined in this pricing supplement will have the meanings given to them in the product prospectus supplement FIN-1. In the event of any conflict, this pricing supplement will control. ***The Notes vary from the terms described in the product prospectus supplement FIN-1 in several important ways. You should read this pricing supplement carefully.***

This pricing supplement, together with the documents listed below, contains the terms of the Notes and supersedes all prior or contemporaneous oral statements as well as any other written materials including preliminary or indicative pricing terms, correspondence, trade ideas, structures for implementation, sample structures, brochures or other educational materials of ours. You should carefully consider, among other things, the matters set forth in “Risk Factors” in the prospectus supplement dated September 14, 2021, “Additional Risk Factors Specific to the Notes” in the product prospectus supplement FIN-1 dated September 14, 2021 and “Additional Risk Factors” in this pricing supplement, as the Notes involve risks not associated with conventional debt securities. We urge you to consult your investment, legal, tax, accounting and other advisors before you invest in the Notes. You may access these documents on the SEC website at www.sec.gov as follows (or if that address has changed, by reviewing our filings for the relevant date on the SEC website):

Prospectus dated September 14, 2021:

<https://www.sec.gov/Archives/edgar/data/1000275/000121465921009470/rbc911212424b3.htm>

Prospectus Supplement dated September 14, 2021:

<https://www.sec.gov/Archives/edgar/data/1000275/000121465921009472/rbcsupp911210424b3.htm>

Product Prospectus Supplement FIN-1 dated September 14, 2021:

https://www.sec.gov/Archives/edgar/data/1000275/000114036121031256/brhc10028916_424b5.htm

ADDITIONAL RISK FACTORS

The Notes involve risks not associated with an investment in ordinary floating rate notes. This section describes the most significant risks relating to the terms of the Notes. For additional information as to the risks related to an investment in the Notes, please see the accompanying product prospectus supplement FIN-1, and the prospectus supplement and prospectus. You should carefully consider whether the Notes are suited to your particular circumstances before you decide to purchase them. Accordingly, prospective investors should consult their financial and legal advisors as to the risks entailed by an investment in the Notes and the suitability of the Notes in light of their particular circumstances.

Risks Relating to the Terms and Structure of the Notes

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

Additional Risks Relating to SOFR

The Secured Overnight Financing Rate Is a Relatively New Reference Rate and its Composition and Characteristics Are Not the Same as LIBOR. On June 22, 2017, the Alternative Reference Rates Committee ("ARRC") convened by the Board of Governors of the Federal Reserve System and the Federal Reserve Bank of New York identified the Secured Overnight Financing Rate ("SOFR") as the rate that, in the consensus view of the ARRC, represented best practice for use in certain new U.S. dollar derivatives and other financial contracts. SOFR is a broad measure of the cost of borrowing cash overnight collateralized by U.S. treasury securities, and has been published by the Federal Reserve Bank of New York since April 2018. The Federal Reserve Bank of New York has also begun publishing historical indicative Secured Overnight Financing Rates from 2014. Investors should not rely on any historical changes or trends in SOFR as an indicator of future changes in SOFR.

The composition and characteristics of SOFR are not the same as those of LIBOR, and SOFR is fundamentally different from LIBOR for two key reasons. First, SOFR is a secured rate, while LIBOR is an unsecured rate. Second, SOFR is an overnight rate, while LIBOR is a forward-looking rate that represents interbank funding over different maturities (e.g., three months). As a result, there can be no assurance that SOFR (including SOFR, compounded as described in this document) will perform in the same way as LIBOR would have at any time, including, without limitation, as a result of changes in interest and yield rates in the market, market volatility or global or regional economic, financial, political, regulatory, judicial or other events.

SOFR May Be More Volatile Than Other Benchmark or Market Rates. Since the initial publication of SOFR, daily changes in SOFR have, on occasion, been more volatile than daily changes in other benchmark or market rates, such as USD LIBOR. Although changes in SOFR, compounded as described in this document, 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. In addition, the volatility of SOFR has reflected the underlying volatility of the overnight U.S. Treasury repo market. The Federal Reserve Bank of New York has at times conducted operations in the overnight U.S. Treasury repo market in order to help maintain the federal funds rate within a target range. There can be no assurance that the Federal Reserve Bank of New York will continue to conduct such operations in the future, and the duration and extent of any such operations is inherently uncertain. The effect of any such operations, or of the cessation of such operations to the extent they are commenced, is uncertain and could be materially adverse to investors in the Notes.

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 USD 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 USD 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 any secondary market.

In addition, 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 Notes may be lower than those of securities that are linked to rates that are more widely used. Similarly, market terms for floating-rate debt securities linked to SOFR, such as the spread over the base rate reflected in interest rate provisions or the manner of compounding the base rate, may evolve over time, and trading prices of the Notes may be lower than those of later-issued SOFR-based debt securities as a result. Investors in the Notes may not be able to sell the Notes at all or may not be able to sell the 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 Interest Rate on the Notes Is Based on a Compounded SOFR Rate, which is Relatively New in the Marketplace. The interest rate on the Notes during the Floating Rate Period will be based on compounded SOFR, which is calculated using the SOFR published by the Federal Reserve Bank of New York, compounded according to the specific formula described above, and not the SOFR rate published on or in respect of a particular date during an interest period or an arithmetic average of SOFR rates during that period. For this and other reasons, the interest rate on the Notes during any interest period will not necessarily be the same as the interest rate on other SOFR-linked investments that use an alternative basis to determine the interest rate. Further, if the SOFR rate in respect of a particular date during an interest period is negative, its contribution to compounded SOFR will be less than one, resulting in a reduction to the formula used to calculate the interest payable on the Notes on the applicable Interest Payment Date for the applicable interest period.

Limited market precedent exists for securities that use SOFR as the interest rate, and the method for calculating an interest rate based upon SOFR in those precedents varies. Accordingly, the use of SOFR and/or the specific formula for compounded SOFR used in the 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 Notes.

The Reference Rate with Respect to a Particular Interest Period Will Only Be Capable of Being Determined Near the End of the Relevant Interest Period. Compounded SOFR applicable to a particular interest period and, therefore, the amount of interest payable with respect to such interest period will be determined on the Interest Determination Date (as defined above) for such interest period. Because each such date is near the end of such interest period, you will not know the amount of interest payable with respect to a particular interest period until shortly prior to the related Interest Payment Date, and it may be difficult for you to reliably estimate the amount of interest that will be payable on each such Interest Payment Date. In addition, some investors may be unwilling or unable to trade the Notes without changes to their information technology systems, both of which could adversely impact the liquidity and trading price of the Notes.

SOFR May Be Modified or Discontinued and the Notes May Bear Interest by Reference to a Rate Other than SOFR, which Could Adversely Affect the Value of the Notes. SOFR is published by the Federal Reserve Bank of New York based on data received by it from sources other than us, and we have no control over its methods of calculation, publication schedule, rate revision practices or availability of SOFR at any time. There can be no guarantee, particularly given its relatively recent introduction, that SOFR will not be discontinued or fundamentally altered in a manner that is

materially adverse to the interests of investors in the Notes. If the manner in which SOFR 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 Notes and the trading prices of the Notes. In addition, the Federal Reserve Bank of New York may withdraw, modify or amend the published 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 SOFR data that the Federal Reserve Bank of New York may publish after the interest rate for that interest period has been determined.

If the Calculation Agent determines that a Benchmark Transition Event and its related Benchmark Replacement Date have occurred in respect of SOFR, then the interest rate on the Notes will no longer be determined by reference to SOFR, but instead will be determined by reference to a different rate, plus a spread adjustment, which we refer to as a "Benchmark Replacement," as further described below.

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) the International Swaps and Derivatives Association ("ISDA") or (iii) in certain circumstances, the Calculation Agent. In addition, the terms of the Notes expressly authorize the Calculation Agent to make Benchmark Replacement Conforming Changes with respect to, among other things, changes to the definition of "interest period," the methodology, 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 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 Notes in connection with a Benchmark Transition Event, could adversely affect the value of the Notes, the return on the Notes and the price at which you can sell such Notes.

In addition, (i) the composition and characteristics of the Benchmark Replacement will not be the same as those of SOFR, the Benchmark Replacement may 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 Notes, the return on the Notes and the price at which you may sell the Notes), (ii) any failure of the Benchmark Replacement to gain market acceptance could adversely affect the Notes, (iii) the Benchmark Replacement may have a very limited history and the future performance of the Benchmark Replacement may not be predicted based on historical performance, (iv) the secondary trading market for Notes linked to the Benchmark Replacement may be limited and (v) 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 your interests in doing so.

AGREEMENT WITH RESPECT TO THE EXERCISE OF CANADIAN BAIL-IN POWERS

By its acquisition of the Notes, each holder or beneficial owner is deemed to (i) agree to be bound, in respect of that Note, by the CDIC Act, including the conversion of that Note, 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 that Note in consequence, and by the application of the laws of the Province of Ontario and the federal laws of Canada applicable therein in respect of the operation of the CDIC Act with respect to that Note; (ii) attorn and submit to the jurisdiction of the courts in the Province of Ontario 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 that Note, any other law that governs that Note and any other agreement, arrangement or understanding between that holder or beneficial owner and the Bank with respect to that Note.

Holders and beneficial owners of any Note will have no further rights in respect of that Note to the extent that Note is 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 Notes We May Offer—Special Provisions Related to Bail-inable Notes” in the accompanying prospectus supplement dated September 14, 2021 for a description of provisions applicable to the Notes as a result of Canadian bail-in powers.

EFFECT OF BENCHMARK TRANSITION EVENT ON SOFR

(a) *Benchmark Replacement.* If the Calculation Agent 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 applicable to the payments on the Notes, the Benchmark Replacement will replace the then-current Benchmark for all purposes relating to the 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 Calculation Agent will have the right to make Benchmark Replacement Conforming Changes from time to time.

(c) *Decisions and Determinations.* Any determination, decision or election that may be made by the Calculation Agent or us pursuant to the benchmark replacement provisions described herein, including any determination with respect to 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, may be made in the Calculation Agent's sole discretion, notwithstanding anything to the contrary in this pricing supplement and the accompanying product supplement, prospectus supplement and prospectus relating to the Notes;
- if made by us, will be made in our sole discretion;
- if made by the Calculation Agent, will be made after consultation with us, and the Calculation Agent will not make any such determination, decision or election to which we object; and
- shall become effective without consent from any other party.

Any determination, decision or election pursuant to the benchmark replacement provisions not made by the Calculation Agent will be made by us on the basis as described above. The Calculation Agent shall have no liability for not making any such determination, decision or election. In addition, we may designate an entity (which may be our affiliate) to make any determination, decision or election that we have the right to make in connection with the benchmark replacement provisions set forth in this pricing supplement.

Certain Defined Terms

As used herein:

"Benchmark" means, initially, the SOFR reference rate, as such term is defined above; provided that if a Benchmark Transition Event and its related Benchmark Replacement Date have occurred with respect to SOFR or the then-current Benchmark, then *"Benchmark"* means the applicable Benchmark Replacement.

"Benchmark Replacement" means the first alternative set forth in the order below that can be determined by the Calculation Agent as of the Benchmark Replacement Date:

- (1) the sum of: (a) an 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;
- (2) the sum of: (a) the ISDA Fallback Rate and (b) the Benchmark Replacement Adjustment; and

- (3) provided that if (i) the Benchmark Replacement cannot be determined in accordance with clause (1) or (2) above as of the Benchmark Replacement Date or (ii) the Calculation Agent shall have determined that the ISDA Fallback Rate determined in accordance with clause (2) above is not an industry-accepted rate of interest as a replacement for the then-current Benchmark for U.S. dollar-denominated floating rate notes at such time, then the Benchmark Replacement shall be the sum of: (a) the alternate rate of interest that has been selected by the Calculation Agent 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 Calculation Agent as of the Benchmark Replacement Date:

- (1) the spread adjustment (which may be a positive or negative value or zero), or method for calculating or determining such spread adjustment 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; and
- (3) the spread adjustment (which may be a positive or negative value or zero) that has been selected by the Calculation Agent 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 definitions or interpretations of interest period, Observation Period, the methodology, timing and frequency of determining rates and making payments of interest, the rounding of amounts or tenors, and other administrative matters) that the Calculation Agent decides may be appropriate to reflect the adoption of such Benchmark Replacement in a manner substantially consistent with market practice (or, if the Calculation Agent decides that adoption of any portion of such market practice is not administratively feasible or if the Calculation Agent determines that no market practice for use of the Benchmark Replacement exists or that no market practice for such use is applicable to the Notes offered hereby, in such other manner as the Calculation Agent 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.

For the avoidance of doubt, for purposes of the definitions of Benchmark Replacement Date and Benchmark Transition Event, references to Benchmark also include any reference rate underlying such Benchmark.

“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.

“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 *Federal Reserve Bank of New York*, currently at <http://www.newyorkfed.org>, or any successor source.

“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.

“Reference Time” with respect to any determination of the Benchmark means (1) if the Benchmark is SOFR, the time determined as set forth above with respect to SOFR, and (2) if the Benchmark is not SOFR, the time determined by the Calculation Agent 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.

“Unadjusted Benchmark Replacement” means the Benchmark Replacement excluding the Benchmark Replacement Adjustment.

SUPPLEMENTAL PLAN OF DISTRIBUTION (CONFLICTS OF INTEREST)

Delivery of the Notes will be made against payment for the Notes on October 17, 2023. For additional information as to the relationship between us and RBC Capital Markets, LLC, please see the section “Plan of Distribution—Conflicts of Interest” in the prospectus.

After the initial offering of the Notes, the price to the public may change.

We may use this pricing supplement in the initial sale of the Notes. In addition, RBCCM or another of our affiliates may use this pricing supplement in a market-making transaction in the Notes after their initial sale. ***Unless we or our agent informs the purchaser otherwise in the confirmation of sale, this pricing supplement is being used in a market-making transaction.***

VALIDITY OF THE NOTES

In the opinion of Norton Rose Fulbright Canada LLP, the issue and sale of the Notes has been duly authorized by all necessary corporate action of the Bank in conformity with the Indenture, and when the Notes have been duly executed, authenticated and issued in accordance with the Indenture and delivered against payment therefor, the Notes will be validly issued and, to the extent validity of the Notes is a matter governed by the laws of the Province of Ontario or Québec, or the laws of Canada applicable therein, will be valid obligations of the Bank, subject to equitable remedies which may only be granted at the discretion of a court of competent authority, subject to applicable bankruptcy, to rights to indemnity and contribution under the Notes or the Indenture which may be limited by applicable law, to insolvency and other laws of general application affecting creditors' rights, to limitations under applicable limitations statutes, and to limitations as to the currency in which judgments in Canada may be rendered, as prescribed by the Currency Act (Canada). This opinion is given as of the date hereof and is limited to the laws of the Provinces of Ontario and Québec and the federal laws of Canada applicable thereto. In addition, this opinion is subject to customary assumptions about the Trustee's authorization, execution and delivery of the Indenture and the genuineness of signatures and certain factual matters, all as stated in the letter of such counsel dated September 14, 2021, which has been filed as Exhibit 5.3 to the Bank's Form 6-K filed with the SEC dated September 14, 2021.

In the opinion of Ashurst LLP, when the Notes have been duly completed in accordance with the Indenture and issued and sold as contemplated by the prospectus supplement and the prospectus, the Notes will be valid, binding and enforceable obligations of the Bank, entitled to the benefits of the Indenture, subject to applicable bankruptcy, insolvency, fraudulent transfer, reorganization, moratorium and similar laws of general applicability relating to or affecting creditors' rights and subject to general principles of equity, public policy considerations and the discretion of the court before which any suit or proceeding may be brought. This opinion is given as of the date hereof and is limited to the laws of the State of New York. This opinion is subject to customary assumptions about the Trustee's authorization, execution and delivery of the Indenture and the genuineness of signatures and to such counsel's reliance on the Bank and other sources as to certain factual matters, all as stated in the legal opinion dated September 14, 2021, which has been filed as Exhibit 5.4 to the Bank's Form 6-K dated September 14, 2021.