

Pricing Supplement

Dated January 8, 2024

To the Product Prospectus Supplement No. CCBN-1, the Prospectus Supplement and the Prospectus, Each Dated December 20, 2023

\$750,000

Auto-Callable Contingent Coupon Barrier Notes Linked to the Lesser Performing of Two Exchange Traded Funds, Due January 13, 2027 Royal Bank of Canada

Royal Bank of Canada is offering Auto-Callable Contingent Coupon Barrier Notes (the "Notes") linked to the lesser performing of the shares of two exchange traded funds (each, a "Reference Asset," and collectively, the "Reference Assets"). The Notes are our senior unsecured obligations, will pay a quarterly Contingent Coupon at the rate and under the circumstances specified below, and will have the terms described in the documents described above, as supplemented or modified by this pricing supplement.

| Reference Assets | Initial Prices | Coupon Barriers and Trigger Prices |
|---|----------------|--|
| Energy Select Sector SPDR [®] Fund ("XLE") | \$83.70 | \$66.96, which is 80% of its Initial Price |
| Technology Select Sector SPDR [®] Fund ("XLK") | \$188.74 | \$150.99, which is 80% of its Initial Price* |

*Rounded to two decimal places.

The Notes do not guarantee any return of principal at maturity. Any payments on the Notes are subject to our credit risk. Investing in the Notes involves a number of risks. See "Selected Risk Considerations" beginning on page P-8 of this pricing supplement, and "Risk Factors" beginning on page PS-4 of the product prospectus supplement and on page S-3 of the prospectus supplement, each dated December 20, 2023. 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 are not subject to conversion into our common shares under subsection 39.2(2.3) of the Canada Deposit Insurance Corporation Act.

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

| Issuer: | Royal Bank of Canada | Stock Exchange Listing: | None | | |
|--|--|-------------------------------------|----------------------|------------------------------|-------|
| Trade Date: | January 8, 2024 | Principal Amount: | \$1,000 per Note | | |
| Issue Date: | January 11, 2024 | Maturity Date: | January 13, 2027 | | |
| Observation Dates: | Quarterly, as set forth below. | Coupon Payment Dates: | Quarterly, as set fo | orth below. | |
| Valuation Date: | January 8, 2027 | Contingent Coupon Rate: | 14.50% per annum | 1 | |
| Contingent Coupon: | If the closing price of each Reference Asset is greater than or equal to its Coupon Barrier on the applicable Observation Date, we will pay the Contingent Coupon applicable to the corresponding Observation Date. You may not receive any Contingent Coupons during the term of the Notes. | | | | |
| Payment at Maturity (if held to maturity): | If the Notes are not previously called, we will pay you at maturity an amount based on the Final Price of the Lesser Performing Reference Asset: | | | | |
| | For each \$1,000 in principal amount, \$1,000 plus the Contingent Coupon at maturity, unless the Final Price of the Lesser Performing Reference Asset is less than its Trigger Price. | | | | |
| | If the Final Price of the Lesser Performing Reference Asset is less than its Trigger Price, then the investor will receive at maturity, | | | | |
| | for each \$1,000 in principal amount, a cash payment equal to: | | | | |
| | s1,000 + (\$1,000 x Percenta | d lose some or all of their princin | al amount if the Fir | al Price of the Lesser Perfo | rmina |
| | Reference Asset is less th | an its Trigger Price. | | | ming |
| Lesser Performing Reference Asset: | The Reference Asset with the lowest Percentage Change. | | | | |
| Call Feature: | If the closing price of each Reference Asset is greater than or equal to its Initial Price starting on April 8, 2024 and on any quarterly Call Observation Date thereafter, the Notes will be automatically called for 100% of their principal amount, plus the Contingent Coupon applicable to the corresponding Observation Date. | | | | |
| Call Settlement Dates: | The Coupon Payment Date corresponding to that Observation Date. | | | | |
| Final Price: CUSIP: | For each Reference Asset, its closing price on the Valuation Date. 78017FC92 | | | | |
| | | | Per Note | Total | |
| | Price to public ⁽¹⁾ | | 100.00% | \$750,000 | |
| | Underwriting discounts and comm | issions ⁽¹⁾ | 1.00% | \$7,500 | |
| | Proceeds to Royal Bank of Canad | а | 99.00% | \$742,500 | |

⁽¹⁾ We or one of our affiliates may pay varying selling concessions of up to \$10.00 per \$1,000 in principal amount of the Notes in connection with the distribution of the Notes to other registered broker-dealers. Certain dealers who purchase the Notes for sale to certain fee-based advisory accounts may forego some or all of their underwriting discount or selling concessions. The public offering price for investors purchasing the Notes in these accounts may be between \$990 and \$1,000 per \$1,000 in principal amount. See "Supplemental Plan of Distribution (Conflicts of Interest)" below.

The initial estimated value of the Notes as of the Trade Date was \$977.22 per \$1,000 in principal amount, which is less than the price to public. The actual value of the Notes at any time will reflect many factors, cannot be predicted with accuracy, and may be less than this amount. We describe our determination of the initial estimated value in more detail below.

SUMMARY

The information in this "Summary" section is qualified by the more detailed information set forth in this pricing supplement, the product prospectus supplement, the prospectus supplement and the prospectus.

| General: | This pricing supplement relates to an offering of Auto-Callable Contingent Coupon Barrier Notes (the "Notes") linked to the lesser performing of the shares of two exchange traded funds (the "Reference Assets"). | | |
|-------------------------|--|--------------------------------------|---|
| Issuer: | Royal Bank of Canada (the "Bank") | | |
| Trade Date: | January 8, 2024 | | |
| Issue Date: | January 11, 2024 | | |
| Valuation Date: | January 8, 2027 | | |
| Maturity Date: | January 13, 2027 | | |
| Denominations: | Minimum denomination of \$1,000, and integral multiples of \$1,000 thereafter. | | |
| Contingent Coupon: | We will pay you a Contingent Coupon during the term of the Notes, periodically in arreat on each Coupon Payment Date, under the conditions described below: | | |
| | If the closing price of each Reference Asset is greater than or equal to its Coupon Barrier on the applicable Observation Date, we will pay the Contingent Coupon applicable to that Observation Date. | | |
| | If the closing price of either of the Reference Assets is less than its Coupon Barrier on the applicable Observation Date, we will not pay you the Contingent Coupon applicable to that Observation Date. | | |
| | You may not receive a Co the term of the Notes. | ontingent Coupon for one or mo | re quarterly periods during |
| Contingent Coupon Rate: | 14.50% per annum (3.625% p | per quarter) | |
| Observation Dates and | Quarterly, as set forth in the table below: | | |
| Coupon Payment Dates: | | Coupon Payment Dates | |
| | | April 11, 2024 | |
| | April 0, 2024 | April 11, 2024 | |
| | October 8, 2024 | Octobor 11, 2024 | |
| | January 8, 2025 | Japuany 13, 2025 | |
| | April 9, 2025 | April 11, 2025 | |
| | Luby 8, 2025 | Luk 11 2025 | |
| | October 8, 2025 | October 14, 2025 | |
| | January 8, 2026 | Japuany 13, 2026 | |
| | | April 12, 2026 | |
| | | April 13, 2020 | |
| | July 0, 2020 | July 13, 2020 | |
| | | | |
| | January 8, 2027 (the Valuation | January 13, 2027 (the Maturity Date) | |
| Design I Destan | | | - (- · · · · · · · · · · · · · · · · · |
| Record Dates: | I he record date for each Coupon Payment Date will be the date one business day prior to that scheduled Coupon Payment Date: provided however that any Contingent | | |

The record date for each Coupon Payment Date will be the date one business day prior to that scheduled Coupon Payment Date; provided, however, that any Contingent Coupon payable at maturity or upon a call will be payable to the person to whom the payment at maturity or upon the call, as the case may be, will be payable.

| Call Feature: | If, on any Observation Date beginning in April 2024, the closing price of each Reference Asset is greater than or equal to its Initial Price, then the Notes will be automatically called. | |
|---|---|--|
| Payment if Called: | If the Notes are automatically called, then, on the applicable Call Settlement Date, for each \$1,000 principal amount, you will receive \$1,000 plus the Contingent Coupon otherwise due on that Call Settlement Date. | |
| Call Settlement Dates: | If the Notes are called on any Observation Date beginning in April 2024, the Call Settlement Date will be the Coupon Payment Date corresponding to that Observation Date. | |
| Initial Price: | For each Reference Asset, its closing price on the Trade Date, as set forth on the cover page of this pricing supplement. | |
| Final Price: | For each Reference Asset, its closing price on the Valuation Date. | |
| Coupon Barrier and Trigger Price: | For each Reference Asset, 80% of its Initial Price, as set forth on the cover page of this pricing supplement. | |
| Payment at Maturity (if not previously called and | If the Notes are not previously called, we will pay you at maturity an amount based on the Final Price of the Lesser Performing Reference Asset: | |
| held to maturity): | • If the Final Price of the Lesser Performing Reference Asset is greater than or equal to its Trigger Price, we will pay you a cash payment equal to the principal amount plus the Contingent Coupon otherwise due on the Maturity Date. | |
| | If the Final Price of the Lesser Performing Reference Asset is less than its Trigger Price, you will receive at maturity, for each \$1,000 in principal amount, a cash payment equal to: \$1,000 + (\$1,000 x Percentage Change of the Lesser Performing Reference Asset) | |
| | The amount of cash that you receive in this case will be less than your principal amount, if anything, resulting in a loss that is proportionate to the decline of the Lesser Performing Reference Asset from the Trade Date to the Valuation Date. <i>Investors in the Notes will lose some or all of their principal amount if the Final Price of the Lesser Performing Reference Asset is less than its Trigger Price.</i> | |
| Stock Settlement: | Not applicable. Payments on the Notes will be made solely in cash. | |
| Percentage Change: | With respect to each Reference Asset: <u>Final Price – Initial Price</u> Initial Price | |
| Lesser Performing Reference Asset: | The Reference Asset with the lowest Percentage Change. | |
| Market Disruption Events: | The occurrence of a market disruption event (or a non-trading day) as to either of the Reference Assets will result in the postponement of an Observation Date or the Valuation Date as to that Reference Asset, as described in the product prospectus supplement, but not to any non-affected Reference Asset. | |
| Calculation Agent: | RBC Capital Markets, LLC | |

| U.S. Tax Treatment: | By purchasing a Note, each holder agrees (in the absence of a change in law, an administrative determination or a judicial ruling to the contrary) to treat the Notes as a callable pre-paid cash-settled contingent income-bearing derivative contract linked to the Reference Assets for U.S. federal income tax purposes. However, the U.S. federal income tax consequences of your investment in the Notes are uncertain and the Internal Revenue Service could assert that the Notes should be taxed in a manner that is different from that described in the preceding sentence. Please see the section below, "Supplemental Discussion of U.S. Federal Income Tax Consequences," and the discussion (including the opinion of Ashurst LLP, our special U.S. tax counsel) in the product prospectus supplement dated December 20, 2023, under "Supplemental Discussion of U.S. Federal Income Tax Consequences," which apply to the Notes. |
|--|--|
| Secondary Market: | RBC Capital Markets, LLC (or one of its affiliates), though not obligated to do so, may maintain a secondary market in the Notes after the issue date. The amount that an investor may receive upon sale of the Notes prior to maturity may be less than the principal amount. |
| 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 dated December 20, 2023). |
| Terms Incorporated in the Master Note: | All of the terms appearing on the cover page and above the item captioned "Secondary Market" in this section and the terms appearing under the caption "General Terms of the Notes" in the product prospectus supplement, as modified by this pricing supplement. |

Royal Bank of Canada

ADDITIONAL TERMS OF YOUR NOTES

You should read this pricing supplement together with the prospectus dated December 20, 2023, as supplemented by the prospectus supplement dated December 20, 2023, relating to our Senior Global Medium-Term Notes, Series J, of which these Notes are a part. Capitalized terms used but not defined in this pricing supplement will have the meanings given to them in the product prospectus supplement. In the event of any conflict, this pricing supplement will control. *The Notes vary from the terms described in the product prospectus supplement 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 and in the product prospectus supplement, each dated December 20, 2023, 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 Securities and Exchange Commission (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 December 20, 2023:

https://www.sec.gov/Archives/edgar/data/1000275/000119312523299520/d645671d424b3.htm Prospectus Supplement dated December 20, 2023: https://www.sec.gov/Archives/edgar/data/1000275/000119312523299523/d638227d424b3.htm Product Prospectus Supplement No. CCBN-1 dated December 20, 2023: https://www.sec.gov/Archives/edgar/data/1000275/000114036123058551/ef20016900_424b5.htm

Our Central Index Key, or CIK, on the SEC website is 1000275. As used in this pricing supplement, "we," "us," or "our" refers to Royal Bank of Canada.

HYPOTHETICAL EXAMPLES

The table set out below is included for illustration purposes only. The table illustrates the Payment at Maturity of the Notes (including the final Contingent Coupon, if payable) for a hypothetical range of performance for the Lesser Performing Reference Asset, assuming the following terms and that the Notes are not automatically called prior to maturity:

| Hypothetical Initial Price (for each Reference Asset): | \$100.00* |
|---|--|
| Hypothetical Coupon Barrier and Trigger Price (for each Reference Asset): | \$80.00, which is 80% of its hypothetical Initial Price. |
| Contingent Coupon Rate: | 14.50% per annum (or 3.625% per quarter) |
| Contingent Coupon Amount: | \$36.25 per quarter |
| Observation Dates: | Quarterly |
| Principal Amount: | \$1,000 per Note |

* The hypothetical Initial Price of \$100 used in the examples below has been chosen for illustrative purposes only and is not the actual Initial Price of either Reference Asset. The actual Initial Price for each Reference Asset is set forth on the cover page of this pricing supplement. We make no representation or warranty as to which of the Reference Assets will be the Lesser Performing Reference Asset. It is possible that the Final Price of each Reference Asset will be less than its Coupon Barrier and Trigger Price.

Hypothetical Final Prices of the Lesser Performing Reference Asset are shown in the first column on the left. The second column shows the Payment at Maturity for a range of Final Prices. The third column shows the amount of cash to be paid on the Notes per \$1,000 in principal amount. If the Notes are called prior to maturity, the hypothetical examples below will not be relevant, and you will receive on the applicable Coupon Payment Date, for each \$1,000 principal amount, \$1,000 plus the Contingent Coupon otherwise due on the Notes.

| Hypothetical Final Price of the Lesser Performing Reference Asset | Payment at Maturity as Percentage of Principal Amount | Payment at Maturity (assuming that the Notes were not previously called) |
|---|---|--|
| \$150.00 | 103.625%* | \$1,036.25* |
| \$140.00 | 103.625%* | \$1,036.25* |
| \$130.00 | 103.625%* | \$1,036.25* |
| \$120.00 | 103.625%* | \$1,036.25* |
| \$110.00 | 103.625%* | \$1,036.25* |
| \$100.00 | 103.625%* | \$1,036.25* |
| \$90.00 | 103.625%* | \$1,036.25* |
| \$80.00 | 103.625%* | \$1,036.25* |
| \$79.99 | 79.99% | \$799.90 |
| \$70.00 | 70.00% | \$700.00 |
| \$60.00 | 60.00% | \$600.00 |
| \$50.00 | 50.00% | \$500.00 |
| \$40.00 | 40.00% | \$400.00 |
| \$25.00 | 25.00% | \$250.00 |
| \$10.00 | 10.00% | \$100.00 |
| \$0.00 | 0.00% | \$0.00 |

*Including the final Contingent Coupon, if payable.

Hypothetical Examples of Amounts Payable at Maturity

The following hypothetical examples illustrate how the payments at maturity set forth in the table above are calculated, assuming the Notes have not been called.

Example 1: The price of the Lesser Performing Reference Asset increases by 40% from the Initial Price of \$100.00 to its Final Price of \$140.00. Because the Final Price of the Lesser Performing Reference Asset is greater than its Trigger Price and Coupon Barrier, the investor receives at maturity, in addition to the final Contingent Coupon otherwise due on the Notes, a cash payment of \$1,000 per Note, despite the 40% appreciation in the price of the Lesser Performing Reference Asset.

Example 2: The price of the Lesser Performing Reference Asset decreases by 10% from the Initial Price of \$100.00 to its Final Price of \$90.00. Because the Final Price of the Lesser Performing Reference Asset is greater than its Trigger Price and Coupon Barrier, the investor receives at maturity, in addition to the final Contingent Coupon otherwise due on the Notes, a cash payment of \$1,000 per Note, despite the 10% decline in the price of the Lesser Performing Reference Asset.

Example 3: The price of the Lesser Performing Reference Asset is \$50.00 on the Valuation Date, which is less than its Trigger Price and Coupon Barrier. Because the Final Price of the Lesser Performing Reference Asset is less than its Trigger Price and Coupon Barrier, the final Contingent Coupon will not be payable on the Maturity Date, and we will pay only \$500.00 for each \$1,000 in the principal amount of the Notes, calculated as follows:

Principal Amount + (Principal Amount x Percentage Change of the Lesser Performing Reference Asset)

* * *

= \$1,000 + (\$1,000 x -50.00%) = \$1,000 - \$500.00 = \$500.00

The Payments at Maturity shown above are entirely hypothetical; they are based on prices of the Reference Assets that may not be achieved on the Valuation Date and on assumptions that may prove to be erroneous. The actual market value of your Notes on the Maturity Date or at any other time, including any time you may wish to sell your Notes, may bear little relation to the hypothetical Payments at Maturity shown above, and those amounts should not be viewed as an indication of the financial return on an investment in the Notes or on an investment in any Reference Asset or the securities represented by any Reference Asset.

SELECTED RISK CONSIDERATIONS

An investment in the Notes involves significant risks. Investing in the Notes is not equivalent to investing directly in the Reference Assets. These risks are explained in more detail in the section "Risk Factors" in the product prospectus supplement. In addition to the risks described in the prospectus supplement and the product prospectus supplement, you should consider the following:

Risks Relating to the Terms of the Notes

- You May Receive Less than the Principal Amount at Maturity— Investors in the Notes could lose all or a substantial portion of their principal amount if there is a decline in the trading price of the Lesser Performing Reference Asset between the Trade Date and the Valuation Date. If the Notes are not automatically called and the Final Price of the Lesser Performing Reference Asset on the Valuation Date is less than its Trigger Price, the amount of cash that you receive at maturity will represent a loss of your principal that is proportionate to the decline in the closing price of the Lesser Performing Reference Asset from the Trade Date to the Valuation Date. Any Contingent Coupons received on the Notes prior to the Maturity Date may not be sufficient to compensate for any such loss.
- The Notes Are Subject to an Automatic Call If on any Observation Date beginning in April 2024, the closing price of each Reference Asset is greater than or equal to its Initial Price, then the Notes will be automatically called. If the Notes are automatically called, then, on the applicable Call Settlement Date, for each \$1,000 in principal amount, you will receive \$1,000 plus the Contingent Coupon otherwise due on the applicable Call Settlement Date. You will not receive any Contingent Coupons after the Call Settlement Date. You may be unable to reinvest your proceeds from the automatic call in an investment with a return that is as high as the return on the Notes would have been if they had not been called.
- You May Not Receive Any Contingent Coupons We will not necessarily make any coupon payments on the Notes. If the closing price of either of the Reference Assets on an Observation Date is less than its Coupon Barrier, we will not pay you the Contingent Coupon applicable to that Observation Date. If the closing price of either of the Reference Assets is less than its Coupon Barrier on each of the Observation Dates and on the Valuation Date, we will not pay you any Contingent Coupons during the term of, and you will not receive a positive return on, your Notes. Generally, this non-payment of the Contingent Coupon coincides with a period of greater risk of principal loss on your Notes. Accordingly, if we do not pay the Contingent Coupon on the Maturity Date, you will also incur a loss of principal, because the Final Price of the Lesser Performing Reference Asset will be less than its Trigger Price.
- The Notes Are Linked to the Lesser Performing Reference Asset, Even if the Other Reference Asset Performs Better — If either of the Reference Assets has a Final Price that is less than its Trigger Price, your return will be linked to the lesser performing of the Reference Assets. Even if the Final Price of the other Reference Asset has increased compared to its respective Initial Price, or has experienced a decrease that is less than that of the Lesser Performing Reference Asset, your return will only be determined by reference to the performance of the Lesser Performing Reference Asset, regardless of the performance of the other Reference Asset.
- Your Payment on the Notes Will Be Determined by Reference to Each Reference Asset Individually, Not to a Basket, and the Payment at Maturity Will Be Based on the Performance of the Lesser Performing Reference Asset The Payment at Maturity will be determined only by reference to the performance of the Lesser Performing Reference Asset, regardless of the performance of the other Reference Asset. The Notes are not linked to a weighted basket, in which the risk may be mitigated and diversified among each of the basket components. For example, in the case of notes linked to a weighted basket, the return would depend on the weighted aggregate performance of the basket components reflected as the basket return. As a result, the depreciation of one basket component could be mitigated by the appreciation of the other basket component, as scaled by the weighting of those basket components. However, in the case of the Notes, the individual performance of each of the Reference Assets would not be combined, and the depreciation of one Reference Asset would not be mitigated by any appreciation of the other Reference Asset. Instead, your return will depend solely on the Final Price of the Lesser Performing Reference Asset.

- The Call Feature and the Contingent Coupon Feature Limit Your Potential Return The return potential of the Notes is limited to the pre-specified Contingent Coupon Rate, regardless of the appreciation of the Reference Assets. In addition, the total return on the Notes will vary based on the number of Observation Dates on which the Contingent Coupon becomes payable prior to maturity or an automatic call. Further, if the Notes are called due to the Call Feature, you will not receive any Contingent Coupons or any other payment in respect of any Observation Dates after the applicable Call Settlement Date. Since the Notes could be called as early as April 2024, the total return on the Notes could be minimal. If the Notes are not called, you may be subject to the full downside performance of the Lesser Performing Reference Asset even though your potential return is limited to the Contingent Coupon Rate. As a result, the return on an investment in the Notes could be less than the return on a direct investment in the Reference Assets.
- Your Return May Be Lower than the Return on a Conventional Debt Security of Comparable Maturity The return that you will receive on the Notes, which could be negative, may be less than the return you could earn on other investments. Even if your return is positive, your return may be less than the return you would earn if you purchased one of our conventional senior interest bearing debt securities.
- Payments on the Notes Are Subject to Our Credit Risk, and Changes in Our Credit Ratings Are Expected to Affect the Market Value of the Notes The Notes are our senior unsecured debt securities. As a result, your receipt of any Contingent Coupons, if payable, and the amount due on any relevant payment date is dependent upon our ability to repay our obligations on the applicable payment dates. This will be the case even if the prices of the Reference Assets increase after the Trade Date. No assurance can be given as to what our financial condition will be at any time during the term of the Notes.

Risks Relating to the Secondary Market for the Notes

• There May Not Be an Active Trading Market for the Notes-Sales in the Secondary Market May Result in Significant Losses — There may be little or no secondary market for the Notes. The Notes will not be listed on any securities exchange. RBCCM and our other affiliates may make a market for the Notes; however, they are not required to do so. RBCCM or any of our other affiliates may stop any market-making activities at any time. Even if a secondary market for the Notes develops, it may not provide significant liquidity or trade at prices advantageous to you. We expect that transaction costs in any secondary market would be high. As a result, the difference between bid and asked prices for your Notes in any secondary market could be substantial.

Risks Relating to the Initial Estimated Value of the Notes

- The Initial Estimated Value of the Notes Is Less than the Price to the Public The initial estimated value that • is set forth on the cover page of this pricing supplement does not represent a minimum price at which we, RBCCM or any of our affiliates would be willing to purchase the Notes in any secondary market (if any exists) at any time. If you attempt to sell the Notes prior to maturity, their market value may be lower than the price you paid for them and the initial estimated value. This is due to, among other things, changes in the prices of the Reference Assets, the borrowing rate we pay to issue securities of this kind, and the inclusion in the price to the public of the underwriting discount and the estimated costs relating to our hedging of the Notes. These factors, together with various credit, market and economic factors over the term of the Notes, are expected to reduce the price at which you may be able to sell the Notes in any secondary market and will affect the value of the Notes in complex and unpredictable ways. 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 may be less than your original purchase price, as any such sale price would not be expected to include the underwriting discount or our hedging costs relating to the Notes. In addition to bid-ask spreads, the value of the Notes determined by RBCCM for any secondary market price is expected to be based on the secondary rate rather than the internal funding rate used to price the Notes and determine the initial estimated value. As a result, the secondary price will be less than if the internal funding rate was used. The Notes are not designed to be short-term trading instruments. Accordingly, you should be able and willing to hold your Notes to maturity.
- The Initial Estimated Value of the Notes That Is Set Forth on the Cover Page of This Pricing Supplement Is an Estimate Only, Calculated as of the Time the Terms of the Notes Were Set The initial estimated value of the Notes is based on the value of our obligation to make the payments on the Notes, together with the mid-market value of the derivative embedded in the terms of the Notes. See "Structuring the Notes" below. Our

estimate is based on a variety of assumptions, including our credit spreads, expectations as to dividends, interest rates and volatility, and the expected term of the Notes. These assumptions are based on certain forecasts about future events, which may prove to be incorrect. Other entities may value the Notes or similar securities at a price that is significantly different than we do.

The value of the Notes at any time after the Trade Date will vary based on many factors, including changes in market conditions, and cannot be predicted with accuracy. As a result, the actual value you would receive if you sold the Notes in any secondary market, if any, should be expected to differ materially from the initial estimated value of your Notes.

Risks Relating to Conflicts of Interest and Our Trading Activities

Our Business Activities May Create Conflicts of Interest — We and our affiliates expect to engage in trading activities related to the Notes or to the securities represented by the Reference Assets 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' interests in the Notes and the interests we and our affiliates will have in their proprietary accounts, in facilitating transactions, including options and other derivatives transactions, for their customers and in accounts under their management. These trading activities, if they influence the share prices of the Reference Assets, could be adverse to the interests of the holders of the Notes. We and one or more of our affiliates may, at present or in the future, engage in business with the securities represented by the Reference Assets, including making loans to or providing advisory services. These services could include investment banking and merger and acquisition advisory services. These activities may present a conflict between our or one or more of our affiliates' obligations and your interests as a holder of the Notes. Moreover, we, and our affiliates may have published, and in the future expect to publish, research reports with respect to the Reference Assets or securities represented by the Reference Assets. This research is modified from time to time without notice and may express opinions or provide recommendations that are inconsistent with purchasing or holding the Notes. Any of these activities by us or one or more of our affiliates may affect the share price or prices, as applicable, of the Reference Assets, and, therefore, the market value of the Notes.

Risks Relating to the Reference Assets

- An Investment in the Notes Is Subject to Risks Associated with Specific Economic Sectors— The stocks held by each exchange traded fund to which the Notes are linked are issued by companies engaged in a specific sector of the economy, specifically, the energy sector, as to XLE, and the technology sector, as to XLK. Accordingly, an investment in the Notes is subject to the specific risks of companies that operate in each of those sectors. An investment in the Notes may accordingly be more risky than a security linked to a more diversified set of securities. In addition, as of the date of this document, two companies held by the XLE represented more than 40% of the XLE's holdings and two companies held by XLK represented more than 40% of the XLK's holdings. Adverse changes in the prices of the shares of these companies would have a disproportionately adverse impact on the value of the Notes.
- Owning the Notes Is Not the Same as Owning the Securities Represented by the Reference Assets The return on your Notes is unlikely to reflect the return you would realize if you actually owned shares of the Reference Assets or the securities represented by the Reference Assets. For instance, you will not receive or be entitled to receive any dividend payments or other distributions on these securities during the term of your Notes. As an owner of the Notes, you will not have voting rights or any other rights that holders of these securities may have. Furthermore, the Reference Assets may appreciate substantially during the term of the Notes, while your potential return will be limited to the applicable Contingent Coupon payments.
- You Must Rely on Your Own Evaluation of the Merits of an Investment Linked to the Reference Assets In the ordinary course of their business, our affiliates may have expressed views on expected movements in the Reference Assets or the equity securities that they represent, and may do so in the future. These views or reports may be communicated to our clients and clients of our affiliates. However, these views are subject to change from time to time. Moreover, other professionals who transact business in markets relating to any Reference Asset may at any time have significantly different views from those of our affiliates. For these reasons, you are encouraged to derive information concerning the Reference Assets from multiple sources, and you should not rely solely on views expressed by our affiliates.

- An Investment in the Notes Is Subject to Management Risk The Reference Assets are not managed according to traditional methods of "active" investment management, which involve the buying and selling of securities based on economic, financial and market analysis and investment judgment. Instead, each Reference Asset, utilizing a "passive" or indexing investment approach, attempts to approximate the investment performance of its underlying index by investing in a portfolio of securities that generally replicate its underlying index. Therefore, unless a specific security is removed from its underlying index, the Reference Asset generally would not sell a security because the security's issuer was in financial trouble. In addition, each Reference Asset is subject to the risk that the investment strategy of its investment advisor may not produce the intended results.
- The Reference Assets and their Underlying Indices Are Different The performance of each Reference Asset may not exactly replicate the performance of its respective underlying index, because these Reference Assets will reflect transaction costs and fees that are not included in the calculation of its underlying index. It is also possible that the performance of these Reference Assets may not fully replicate or may in certain circumstances diverge significantly from the performance of their underlying indices due to the temporary unavailability of certain securities in the secondary market, the performance of any derivative instruments contained in the Reference Assets, or due to other circumstances. These Reference Assets may use futures contracts, options, swap agreements, currency forwards and repurchase agreements and other instruments in seeking performance that corresponds to their underlying indices and in managing cash flows.

During periods of market volatility, securities held by these Reference Assets may be unavailable in the secondary market, market participants may be unable to calculate accurately their net asset value per share and their liquidity may be adversely affected. This kind of market volatility may also disrupt the ability of market participants to create and redeem shares of the applicable Reference Asset. Further, market volatility may adversely affect, sometimes materially, the prices at which market participants are willing to buy and sell shares of the applicable Reference Asset. As a result, under these circumstances, the market value of shares of these Reference Assets may vary substantially from the applicable net asset value per share. For all of the foregoing reasons, the performance of these Reference Assets may not correlate with the performance of their underlying indices as well as their net asset value per share, which could materially and adversely affect the value of the Notes in the secondary market and/or reduce the payments on the Notes.

- We and Our Affiliates Do Not Have Any Affiliation with the Advisor or the Sponsor of the Reference Assets or the Underlying Indices and Are Not Responsible for Their Public Disclosure of Information We and our affiliates are not affiliated with the investment advisor or the sponsor of any Reference Asset or their underlying indices in any way and have no ability to control or predict their actions, including any errors in or discontinuance of disclosure regarding their methods or policies relating to the Reference Assets or the underlying indices. The investment advisor or the sponsor of the Reference Assets and the underlying indices are not involved in the offering of the Notes in any way and have no obligation to consider your interests as an owner of the Notes in taking any actions relating to the Reference Assets that might affect the value of the Notes. Neither we nor any of our affiliates has independently verified the adequacy or accuracy of the information about the investment advisor, the sponsor, or the Reference Assets contained in any public disclosure of information. You, as an investor in the Notes, should make your own investigation into the Reference Assets.
- The Policies of the Reference Assets' Investment Advisor or Underlying Indices Could Affect the Amounts Payable on the Notes and Their Market Value The policies of the Reference Assets' investment advisor concerning the management of the Reference Assets, or the index sponsor for each underlying index, concerning the calculation of each underlying index, additions, deletions or substitutions of the securities held by the Reference Assets could affect the market price of shares of the Reference Assets and, therefore, the amounts payable on the Notes and the market value of the Notes. The amounts payable on the Notes and their market value of the Reference Assets' investment advisor or relevant sponsors change these policies, for example, by changing the manner in which an investment advisor manages the Reference Assets' investment advisor discontinues or suspends maintenance of a Reference Asset, in which case it may become difficult to determine the market value of the Notes. The Reference Assets' investment advisor has no obligations to you as an investor in the Notes in making its decisions regarding the Reference Assets.

• The Payments on the Notes Are Subject to Postponement due to Market Disruption Events and Adjustments — The payment at maturity, each Observation Date and the Valuation Date are subject to adjustment as described in the product prospectus supplement. For a description of what constitutes a market disruption event as well as the consequences of that market disruption event, see "General Terms of the Notes— Market Disruption Events" in the product prospectus supplement.

Royal Bank of Canada

INFORMATION REGARDING THE REFERENCE ASSETS

Information filed with the SEC by the Reference Assets under the Securities Exchange Act of 1934, as amended, and the Investment Company Act of 1940, as amended, can be obtained through the SEC's website at http://www.sec.gov. In addition, information about the Reference Assets may be obtained from other sources including, but not limited to, press releases, newspaper articles and other publicly disseminated documents. We have not participated in the preparation of, or verified, such publicly available information. None of the forgoing documents or filings are incorporated by reference in, and should not be considered part of, this document.

The following information regarding the Reference Assets is derived from publicly available information.

We have not independently verified the accuracy or completeness of reports filed by the Reference Assets with the SEC, information published by them on their websites or in any other format, information about them obtained from any other source or the information provided below.

Each Reference Asset is an investment portfolio maintained and managed by the applicable investment advisor. The Notes are not sponsored, endorsed, sold or promoted by this investment advisor. The investment advisor makes no representations or warranties to the owners of the Notes or any member of the public regarding the advisability of investing in the Notes. The investment advisor has no obligation or liability in connection with the operation, marketing, trading or sale of the Notes.

The Energy Select Sector SPDR[®] Fund ("XLE")

The XLE seeks to provide investment results that correspond generally to the price and yield performance, before fees and expenses, of the Energy Select Sector Index. The Energy Select Sector Index measures the performance of the energy sector of the U.S. equity market. The XLE is composed of companies engaged in the oil, gas and consumable fuel, energy equipment and services industries. The XLE trades on the NYSE Arca under the ticker symbol "XLE."

The Technology Select Sector SPDR® Fund ("XLK")

The XLK seeks to provide investment results that correspond generally to the price and yield performance, before fees and expenses, of the S&P® Technology Select Sector Index. The S&P® Technology Select Sector Index measures the performance of the technology sector of the U.S. equity market. The XLK trades on the NYSE Arca under the ticker symbol "XLK."

Eligibility Criteria for Index Components

The stocks included in each Select Sector Index are selected from the universe of companies represented by the S&P 500[®] Index. Standard & Poor's Financial Services LLC ("S&P") acts as index calculation agent in connection with the calculation and dissemination of each Select Sector Index. Each stock in the S&P 500[®] Index is allocated to only one Select Sector Index, and the Select Sector Indices together comprise all of the companies in the S&P 500[®] Index.

Index Maintenance

Each Select Sector Index was developed and is maintained in accordance with the following criteria:

- Each of the component stocks in a Select Sector Index (the "Component Stocks") is a constituent company of the S&P 500[®] Index.
- The eleven Select Sector Indices together will include all of the companies represented in the S&P 500[®] Index and each of the stocks in the S&P 500[®] Index will be allocated to only one of the Select Sector Indices.
- Each constituent stock of the S&P 500[®] Index is assigned to a Select Sector Index based on its GICS sector. Each Select Sector Index is made up of all the stocks in the applicable GICS sector.
- Each Select Sector Index is calculated by the index sponsor, Standard & Poor's, using a capped market capitalization methodology where single index constituents or defined groups of index constituents are confined to a maximum weight and the excess weight is distributed proportionally among the remaining index constituents. Each Select Sector Index is rebalanced from time to time to re-establish the proper weighting.
- For reweighting purposes, each Select Sector Index is rebalanced quarterly after the close of business on the third Friday of March, June September and December using the following procedures: (1) The rebalancing reference date is the second Friday of March, June, September and December; (2) With prices reflected on the rebalancing reference date, and membership, shares outstanding and investable weight factors as of the rebalancing effective date, each company is weighted by float-adjusted market capitalization methodology. Modifications are made as defined below.
 - (i) If any Component Stock has a weight greater than 24%, that Component Stock has its float-adjusted market capitalization weight capped at 23%. The 23% weight cap creates a 2% buffer to ensure that no Component Stock exceeds 25% as of the quarter-end diversification requirement date.

- (ii) All excess weight is equally redistributed to all uncapped Component Stocks within the relevant Select Sector Index.
- (iii) After this redistribution, if the float-adjusted market capitalization weight of any other Component Stock(s) then breaches 23%, the process is repeated iteratively until no Component Stocks breaches the 23% weight cap.
- (iv) The sum of the Component Stocks with weights greater than 4.8% cannot exceed 50% of the total index weight. These caps are set to allow for a buffer below the 5% limit.
- (v) If the rule in step (iv) is breached, all the Component Stocks are ranked in descending order of their float-adjusted market capitalization weights and the first Component Stock that causes the 50% limit to be breached has its weight reduced to 4.5%.
- (vi) This excess weight is equally redistributed to all Component Stocks with weights below 4.5%. This process is repeated iteratively until step (iv) is satisfied.
- (vii) Index share amounts are assigned to each Component Stock to arrive at the weights calculated above. Since index shares are assigned based on prices one week prior to rebalancing, the actual weight of each Component Stock at the rebalancing differs somewhat from these weights due to market movements.
- (viii) If, on the second to last business day of March, June, September, or December, a company has a weight greater than 24% or the sum of the companies with weights greater than 4.8% exceeds 50%, a secondary rebalancing will be triggered with the rebalancing effective date being after the close of the last business day of the month. This second rebalancing will use the closing prices as of the second to last business day of March, June, September or December, and membership, shares outstanding, and IWFs as of the rebalancing effective date.

At times, Component Stocks may be represented in the Select Sector Indices by multiple share class lines. Maximum weight capping is based on Component Stock float-adjusted market capitalization, with the weight of multiple class companies allocated proportionally to each share class line based on its float-adjusted market capitalization as of the rebalancing reference date. If no capping is required, both share classes remain in the Select Sector Index at their natural float-adjusted market capitalization.

Each Select Sector Index is calculated using the same methodology utilized by S&P Dow Jones Indices in calculating the S&P 500[®] Index, using a base-weighted aggregate methodology. The daily calculation of each Select Sector Index is computed by dividing the total market value of the companies in the Select Sector Index by a number called the index divisor.

Calculation of Each Underlying Index

Each Select Sector Index is calculated using the same methodology utilized by S&P in calculating the S&P 500[®] Index, using a base-weighted aggregate methodology. The daily calculation of each Select Sector Index is computed by dividing the total market value of the companies in the Select Sector Index by a number called the index divisor.

A SPDR[®] Component Stock which has been assigned to one Select Sector Index may be determined to have undergone a transformation in the composition of its business, and that it should be removed from that Select Sector Index and assigned to a different Select Sector Index. In the event that a SPDR[®] Component Stock's Select Sector Index assignment should be changed, S&P will disseminate notice of the change following its standard procedure for announcing index changes, and will implement the change in the affected Select Sector Indexes after the initial dissemination of information on the sector change.

SPDR[®] Component Stocks removed from and added to the S&P 500[®] Index will be deleted from and added to the appropriate Select Sector Index on the same schedule used by S&P for additions and deletions from the S&P 500[®] Index insofar as practicable.

Additional information regarding the calculation and composition of the Underlying Indices, including the index methodology, may be found on S&P's website. Information included in that website is not included or incorporated by reference into this document.

HISTORICAL INFORMATION

The graphs below set forth the information relating to the historical performance of the Reference Assets. We obtained the information in the graph from Bloomberg Financial Markets, without independent investigation.

Historical Information for the Energy Select Sector SPDR® Fund ("XLE")

The graph below illustrates the performance of this Reference Asset from January 1, 2014 to January 8, 2024. The Initial Price of this Reference Asset is \$83.70. The red line represents its Coupon Barrier and Trigger Price of \$66.96, which is equal to 80% of its Initial Price.



PAST PERFORMANCE IS NOT INDICATIVE OF FUTURE RESULTS.

Historical Information for the Technology Select Sector SPDR® Fund ("XLK")

The graph below illustrates the performance of this Reference Asset from January 1, 2014 to January 8, 2024. The Initial Price of this Reference Asset is \$188.74. The red line represents its Coupon Barrier and Trigger Price of \$150.99, which is equal to 80% of its Initial Price (rounded to two decimal places).



PAST PERFORMANCE IS NOT INDICATIVE OF FUTURE RESULTS.

SUPPLEMENTAL DISCUSSION OF U.S. FEDERAL INCOME TAX CONSEQUENCES

The following disclosure supplements, and to the extent inconsistent supersedes, the discussion in the product prospectus supplement dated December 20, 2023, under "Supplemental Discussion of U.S. Federal Income Tax Consequences."

Under Section 871(m) of the Code, a "dividend equivalent" payment is treated as a dividend from sources within the United States. Such payments generally would be subject to a 30% U.S. withholding tax if paid to a non-U.S. holder. Under U.S. Treasury Department regulations, payments (including deemed payments) with respect to equity-linked instruments ("ELIs") that are "specified ELIs" may be treated as dividend equivalents if such specified ELIs reference, directly or indirectly, an interest in an "underlying security," which is generally any interest in an entity taxable as a corporation for U.S. federal income tax purposes if a payment with respect to such interest could give rise to a U.S. source dividend. However, the IRS has issued guidance that states that the U.S. Treasury Department and the IRS intend to amend the effective dates of the U.S. Treasury Department regulations to provide that withholding on dividend equivalent payments will not apply to specified ELIs that are not delta-one instruments and that are issued before January 1, 2025. Based on our determination that the Notes are not delta-one instruments, non-U.S. holders should not be subject to withholding on dividend equivalent payments, if any, under the Notes. However, it is possible that the Notes could be treated as deemed reissued for U.S. federal income tax purposes upon the occurrence of certain events affecting the Reference Assets or the Notes (for example, upon a Reference Asset rebalancing), and following such occurrence the Notes could be treated as subject to withholding on dividend equivalent payments. Non-U.S. holders that enter, or have entered, into other transactions in respect of the Reference Assets or the Notes should consult their tax advisors as to the application of the dividend equivalent withholding tax in the context of the Notes and their other transactions. If any payments are treated as dividend equivalents subject to withholding, we (or the applicable withholding agent) would be entitled to withhold taxes without being required to pay any additional amounts with respect to amounts so withheld.

SUPPLEMENTAL PLAN OF DISTRIBUTION (CONFLICTS OF INTEREST)

Delivery of the Notes will be made against payment for the Notes on January 11, 2024, which is the third (3rd) business day following the Trade Date (this settlement cycle being referred to as "T+3"). See "Plan of Distribution" in the prospectus dated December 20, 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 dated December 20, 2023.

We will deliver the Notes on a date that is greater than two business days following the Trade Date. Under Rule 15c6-1 of the Exchange Act, trades in the secondary market generally are required to settle in two business days, unless the parties to any such trade expressly agree otherwise. Accordingly, purchasers who wish to trade the Notes more than two business days prior to the original issue date will be required to specify alternative settlement arrangements to prevent a failed settlement.

In the initial offering of the Notes, they will be offered to investors at a purchase price equal to par, except with respect to certain accounts as indicated on the cover page of this document. In addition to the underwriting discount set forth on the cover page, we or one of our affiliates may also pay an expected fee to a broker-dealer that is unaffiliated with us for providing certain electronic platform services with respect to this offering.

The value of the Notes shown on your account statement may be based on RBCCM's estimate of the value of the Notes if RBCCM or another of our affiliates were to make a market in the Notes (which it is not obligated to do). That estimate will be based upon the price that RBCCM may pay for the Notes in light of then prevailing market conditions, our creditworthiness and transaction costs. For a period of approximately three months after the issue date of the Notes, the value of the Notes that may be shown on your account statement may be higher than RBCCM's estimated value of the Notes at that time. This is because the estimated value of the Notes will not include the underwriting discount or our hedging costs and profits; however, the value of the Notes shown on your account statement during that period may initially be a higher amount, reflecting the addition of the underwriting discount and our estimated costs and profits from hedging the Notes. This excess is expected to decrease over time until the end of this period. After this period, if RBCCM repurchases your Notes, it expects to do so at prices that reflect their estimated value.

We may use this pricing supplement in the initial sale of the Notes. In addition, RBC Capital Markets, LLC 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.

STRUCTURING THE NOTES

The Notes are our debt securities, the return on which is linked to the performance of the Reference Assets. As is the case for all of our debt securities, including our structured notes, the economic terms of the Notes reflect our actual or perceived creditworthiness at the time of pricing. In addition, because structured notes result in increased operational, funding and liability management costs to us, we typically borrow the funds under these Notes at a rate that is more favorable to us than the rate that we might pay for a conventional fixed or floating rate debt security of comparable maturity. Using this relatively lower implied borrowing rate rather than the secondary market rate, is a factor that reduced the initial estimated value of the Notes at the time their terms were set. Unlike the estimated value that is set forth on the cover page of this pricing supplement, any value of the Notes determined for purposes of a secondary market transaction may be based on a different funding rate, which may result in a lower value for the Notes than if our initial internal funding rate were used.

In order to satisfy our payment obligations under the Notes, we may choose to enter into certain hedging arrangements (which may include call options, put options or other derivatives) on the issue date with RBCCM or one of our other subsidiaries. The terms of these hedging arrangements take into account a number of factors, including our creditworthiness, interest rate movements, the volatility of the Reference Assets, and the tenor of the Notes. The economic terms of the Notes and their initial estimated value depend in part on the terms of these hedging arrangements.

The lower implied borrowing rate is a factor that reduced the economic terms of the Notes to you. The initial offering price of the Notes also reflects the underwriting discount and our estimated hedging costs. These factors resulted in the initial estimated value for the Notes on the Trade Date being less than their public offering price. See "Selected Risk Considerations—The Initial Estimated Value of the Notes Is Less than the Price to the Public" above.

VALIDITY OF THE NOTES

In the opinion of Norton Rose Fulbright Canada LLP, as Canadian counsel to the Bank, 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 federal laws of Canada applicable therein, will be valid obligations of the Bank, subject to the following limitations: (i) the enforceability of the Indenture may be limited by the Canada Deposit Insurance Corporation Act (Canada), the Winding-up and Restructuring Act (Canada) and bankruptcy, insolvency, reorganization, receivership, moratorium, arrangement or winding-up laws or other similar laws of general application affecting the enforcement of creditors' rights generally; (ii) the enforceability of the Indenture is subject to general equitable principles, including the principle that the availability of equitable remedies, such as specific performance and injunction, may only be granted at the discretion of a court of competent jurisdiction; (iii) under applicable limitations statutes generally, including that the enforceability of the Indenture will be subject to the limitations contained in the Limitations Act, 2002 (Ontario), and such counsel expresses no opinion as to whether a court may find any provision of the Indenture to be unenforceable as an attempt to vary or exclude a limitation period under such applicable limitations statutes; (iv) rights to indemnity and contribution under the Notes or the Indenture which may be limited by applicable law; and (v) courts in Canada are precluded from giving a judgment in any currency other than the lawful money of Canada and such judgment may be based on a rate of exchange in existence on a day other than the day of payment, 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 therein. 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 to such counsel's reliance on the Bank and other sources as to certain factual matters, all as stated in the opinion letter of such counsel dated December 20, 2023, which has been filed as Exhibit 5.3 to the Bank's Form 6-K filed with the SEC dated December 20, 2023.

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 December 20, 2023, which has been filed as Exhibit 5.4 to the Bank's Form 6-K dated December 20, 2023.