*1st SUPPLEMENTARY PROSPECTUS DATED 13 DECEMBER 2022*

# NATIONAL BANK OF CANADA

*(a Canadian chartered bank)*

**CAD 20,000,000,000**
**Legislative Global Covered Bond Programme**
**unconditionally and irrevocably guaranteed as to payments by**
**NBC COVERED BOND (LEGISLATIVE) GUARANTOR LIMITED PARTNERSHIP**
***(a limited partnership formed under the laws of Ontario)***

This Supplement (the "**Supplement**") to the base prospectus dated 2 September 2022 (the "**Prospectus**"), which comprises a base prospectus under Article 8 of Regulation (EU) 2017/1129, as it forms part of United Kingdom domestic law by virtue of the European Union (Withdrawal) Act 2018 (the "**UK Prospectus Regulation**") for National Bank of Canada ("**NBC**" or the "**Bank**"), constitutes a supplementary prospectus in respect of the base prospectus for NBC for purposes of Article 23 of the UK Prospectus Regulation, and is prepared in connection with the CAD 20,000,000,000 Legislative Global Covered Bond Programme of NBC, unconditionally and irrevocably guaranteed as to payments by NBC Covered Bond (Legislative) Guarantor Limited Partnership (the "**Guarantor**"), established by NBC.

Terms defined in the Prospectus have the same meaning when used in this Supplement. This Supplement is supplemental to, and shall be read in conjunction with, the Prospectus. This Supplement has been approved by the United Kingdom Financial Conduct Authority (the "**FCA**"), which is the United Kingdom competent authority for the purposes of the UK Prospectus Regulation, as a supplement to the Prospectus.

NBC and the Guarantor accept responsibility for the information in this Supplement. To the best of the knowledge of NBC and the Guarantor, the information contained in this Supplement is in accordance with the facts and the Supplement contains no omission likely to affect its import.

The purpose of this Supplement is to: (I) incorporate by reference in the Prospectus NBC's: (a) 2022 Annual Information Form (as defined below); (b) latest audited annual results (including management's discussion and analysis thereof) (the "**2022 Annual Report**"); and (c) monthly investor reports for the months of August 2022, September 2022 and October 2022, containing information on the Covered Bond Portfolio; (II) update the litigation statement and the no significant change and no material adverse change statements in the section of the Prospectus entitled "*General Information*"; (III) amend the section of the Prospectus entitled "*Risk Factors*" in connection with the publication of the 2022 Annual Report and (IV) amend the cover page and the sections of the Prospectus entitled "*Risk Factors*", "*Terms and Conditions of the Covered Bonds*", "*Pro Forma Final Terms*" and "*Glossary*" for the purpose of including SARON as a new Reference Rate for the Covered Bonds;

Save as disclosed in this Supplement, no significant new factor, material mistake or material inaccuracy relating to the information included in the Prospectus which is capable of affecting the assessment of Covered Bonds issued under the Programme has arisen or been noted, as the case may be, since the publication of the Prospectus.

THE COVERED BONDS HAVE NOT BEEN APPROVED OR DISAPPROVED BY CANADA MORTGAGE AND HOUSING CORPORATION ("**CMHC**") NOR HAS CMHC PASSED UPON THE ACCURACY OR ADEQUACY OF THIS SUPPLEMENTARY PROSPECTUS. THE COVERED BONDS ARE NOT INSURED OR GUARANTEED BY CMHC OR THE GOVERNMENT OF CANADA OR ANY OTHER AGENCY THEREOF.

To the extent that there is any inconsistency between (a) any statement in this Supplement or any statement incorporated by reference into the Prospectus by this Supplement and (b) any other statement in, or incorporated by reference in, the Prospectus prior to the date of this Supplement, the statements in (a) above will prevail.

## I. DOCUMENTS INCORPORATED BY REFERENCE

By virtue of this Supplement the section entitled "*Documents Incorporated by Reference*" shall be supplemented as follows:

*The following documents which have previously been published by the Bank or are published simultaneously with this Supplement are hereby incorporated in, and form part of, the Prospectus:*

(a) The Bank's Annual Information Form dated 29 November 2022 (the "**2022 Annual Information Form**");

(b) The following sections of the 2022 Annual Report for the year ended 31 October 2022:

(i) Management's Discussion and Analysis of the Bank for the fiscal year ended 31 October 2022 on pages 15 to 125 of the 2022 Annual Report;

(ii) a discussion of economic review and outlook on page 26 of the 2022 Annual Report;

(iii) a business segment analysis on pages 30 to 47 of the 2022 Annual Report;

(iv) a discussion of securitization and off-balance sheet arrangements on pages 53 to 54 of the 2022 Annual Report;

(v) information concerning risk management on pages 65 to 105 of the 2022 Annual Report;

(vi) a discussion of critical accounting estimates on pages 106 to 111 of the 2022 Annual Report;

(vii) a description of the Bank's share capital on pages 199 to 202 of the 2022 Annual Report;

(viii) information concerning principal subsidiaries of the Bank on page 222 of the 2022 Annual Report; and

(ix) the Bank's audited consolidated financial statements for the years ended 31 October 2022 and 2021, together with the notes thereto and the independent auditor's report thereon dated 29 November 2022 on pages 127 to 229 of the 2022 Annual Report, included therein,

the remainder of the 2022 Annual Report is either not relevant for prospective investors or is covered elsewhere in the Prospectus and is not incorporated by reference;

(c) the Bank's monthly (unaudited) Investor Report containing information on the Covered Bond Portfolio as at the Calculation Date falling on 31 August 2022 (the "**August Investor Report**");

(d) the Bank's monthly (unaudited) Investor Report containing information on the Covered Bond Portfolio as at the Calculation Date falling on 29 September 2022 (the "**September Investor Report**"); and

(e) the Bank's monthly (unaudited) Investor Report containing information on the Covered Bond Portfolio as at the Calculation Date falling on 31 October 2022 (the "**October Investor Report**") and together with the August 2022 Investor Report, the September 2022 Investor Report, the "**Investor Reports**").

Copies of the 2022 Annual Information Form, the 2022 Annual Report and the Investor Reports have been submitted to the National Storage Mechanism (operated by the FCA), and are available for viewing at https://data.fca.org.uk/#/nsm/nationalstoragemechanism.

## II. GENERAL INFORMATION

By virtue of this Supplement, paragraphs 3, 4 and 5 of the section entitled "*General Information*" of the Prospectus are deleted and replaced with the following:

"3. Other than as noted under the heading "Litigation" on page 110 of the 2022 Annual Report, under the subsection entitled "Notice of Assessment" in Note 24 on page 214 and under the subsection entitled "Contingent Liabilities – Litigation" in Note 26 on page 217 of the 2022 Annual Report, incorporated by reference herein, there are no governmental, legal or arbitration proceedings (including any such proceedings which are pending or threatened of which the Issuer or Guarantor is aware) during the 12 months prior to the date of this document, which may have, or have had in the recent past, significant effects on the financial position or profitability of the Issuer and its subsidiaries taken as a whole or the Guarantor.

4. There has been no significant change in the financial performance or financial position of the Issuer and its subsidiaries, including the Guarantor, taken as a whole since 31 October 2022, the last day of the financial period in respect of which the most recent comparative published audited annual consolidated financial statements of the Issuer have been prepared.

5. There has been no material adverse change in the prospects of the Issuer and its subsidiaries, including the Guarantor, taken as a whole since 31 October 2022, the last day of the financial period in respect of which the most recent comparative published audited annual consolidated financial statements of the Issuer have been prepared."

## III. RISK FACTORS

By virtue of this Supplement, the section of the Prospectus entitled "*Risk Factors*" is amended as follows:

a) The risk factor entitled "*The Issuer's revenues and earnings are substantially dependant on the general economic and business conditions in regions where it operates*" is deleted and replaced with the following:

"*The Issuer's revenues and earnings are substantially dependent on the general economic, geopolitical and business conditions in regions where it operates*

Although the Issuer operates primarily in Canada, it also has business operations in the United States and other countries. See the sections entitled "*Economic Review and Outlook*" on page 26 of the Issuer's 2022 Annual Report and "*Business Segment Analysis*" on pages 30 to 47 of the Issuer's 2022 Annual Report, each of which is incorporated by reference in this Prospectus, for a description of the global, Canadian and Quebec economies relevant to the Issuer and a detailed analysis of the Issuer's principal business segments. The Issuer is exposed to financial risks outside Canada and the United States primarily through its interbank transactions on international financial markets or through international trade finance activities. This geographic exposure represents a moderate proportion of the Issuer's total risk.

Government decisions and international relations can have a significant impact on the environment in which the Bank operates. Geopolitical events can lead to volatility, have a negative impact on at-risk assets, and cause financial conditions to deteriorate. They could also directly or indirectly affect banking activities by having repercussions on clients. The war in Ukraine, which has disrupted energy and agricultural supply chains, is a good example. The economic sanctions taken against Russia for its invasion of Ukraine and the steps taken by Russia to significantly reduce natural gas supply to Europe have led to soaring energy costs. This situation has triggered the negative economic headwinds now facing Europe and heightened the risk of a political reaction in the form of new governments taking power and social unrest. Even if the war was expected to end relatively quickly, the shattered trust suggests that Europe and Russia will continue to take measures to become less dependent on one another, notably regarding energy matters. While new risks could arise at any time, certain concerns are compelling us to monitor other situations at this time.

The geopolitical power struggle that for years has pitted the U.S. against China is one such concern. Businesses, in particular those operating in sectors deemed strategic, run an increasing risk of finding themselves in a maze of contradictory regulations, where complying with U.S. regulations means violating Chinese law, and vice versa. These tensions could also partially undo some of the ties forged between these two superpowers in the financial markets, and Canada, the Issuer's primary operational jurisdiction, might get caught in the crosshairs of the two countries. A recent escalation in tensions between China and the United States on the subject of Taiwan is a new source of disagreement between the two superpowers. While the Issuer does not believe an invasion is imminent, China can be expected to continue to exert pressure on Taiwan through a combination of unprecedented military exercises and economic sanctions. But the potential for confrontation is not limited to the China-U.S. relationship, as protectionism is gaining popularity, and a growing number of countries are implementing measures to both financially support domestic businesses in key sectors (high tech, health care, and food) and to protect them against global competition through business restrictions. The combined effects of supply shortages and geopolitical tensions have shifted the focus from efficiency to supply security. In the face of ongoing uncertainty in the geopolitical landscape, the Issuer will continue to monitor all of these developments, analyze any new risks that arise, and assess the impacts that they may have on its business and organisation.

Although the economy recovered quickly during the pandemic, a number of risks still remain and others are emerging. Most countries are now dealing with variants; however, the global population is not immune to the emergence of new, more infectious strains that could once again destabilize the economy. For its part, China is going it alone with its zero-COVID policy. Given China's importance to the global economy and supply chain, such a policy, which involves repeated lockdowns, has repercussions not only on growth but also on inflationary pressure. With this in mind, the inflationary outlook remains uncertain insofar as supply chain bottlenecks could stop improving or worse, deteriorate once again.

The war in Ukraine and extreme weather events have proven just how vulnerable the global economy is to such shocks. The sharp rise in inflation in 2022 is presenting another risk, i.e., the risk of spiralling inflation created by higher wages. In fact, the inflationary shock has prompted employees to demand compensation for their lost buying power, which could subsequently compel businesses to raise prices in order to maintain margins, thus creating a vicious cycle. If this scenario of unchecked inflation above central bank targets were to occur, the central banks could move towards a much tighter monetary policy by hiking interest rates even higher. Given that interest rates have remained quite low over the past few years, market participants seeking additional returns may have engaged in excessive risk-taking strategies and would not be immune from negative repercussions should interest rates suddenly spike higher. This would serve as a major headwind for the real estate sector and Canadian households, which have seen their debt levels rise sharply over the past few years.

In Canada, efforts to soft-land the economy after a period of overheating are continuing. So far, indicators are moving in the right direction for the Bank of Canada, which suggests that the terminal rate is approaching in this extremely aggressive tightening cycle. In fact, the labour market is showing signs of moderation: private-sector and full-time jobs have been at a standstill for several months, and hiring intentions are declining, suggesting that there will be no rebound in the short term. Inflationary pressures are less acute and widespread than earlier this year. Nevertheless, given the rushed response and the transmission lag for monetary policy, it is normal for observers to be nervous. Unfortunately, only hindsight will reveal if the response was too aggressive. One thing is certain: there is already a notable slowdown in the real estate market, which is leading to extremely rapid real estate deflation. In the Issuer's view, it will not be necessary to keep interest rates at current levels for long to cool down inflation; consequently, the Issuer expects that the central bank will have to lower them in the second half of 2023. In light of this monetary tightening, the Issuer anticipates an anemic growth rate in 2023, as consumers will be hit simultaneously by a loss of purchasing power, a negative wealth effect, and an interest payment shock.

Lastly, climate issues are an added risk in the current context. If too few measures are adopted on the climate front, severe weather events will intensify and result in economic woes over the long term. Conversely, a too-swift transition could result in other risks, particularly short- and medium-term costs and rising pressure on production costs. In short, given the ongoing uncertainties in this environment, the Bank remains vigilant in the face of numerous factors and is continuing to rely on its strong risk management framework to identify, assess, and mitigate the negative impacts while also remaining within its risk appetite limits.

The Issuer's revenues could therefore be affected by the economic, geopolitical and business conditions prevailing in the countries in which it operates, including as a result of the strength of the economy and inflation, the credit conditions of businesses, financial market and exchange rate fluctuations, monetary policy trends and interest rates. All of these factors affect the business, geopolitical and economic conditions in a given geographic region and, consequently, affect the Issuer's level of business activity and resulting earnings in that region. Although some risks may seem remotely related to the Issuer's business context, strong global economic and financial integration requires a vigilant approach."

b) The risk factor entitled "*The COVID-19 pandemic has impacted the global economy, the financial markets and the Issuer, and the ultimate impact of the pandemic will depend on future events that are highly uncertain and cannot be predicted*" is deleted and replaced with the following:

"*The COVID-19 pandemic has impacted the global economy, the financial markets and the Issuer, and the ultimate impact of the pandemic will depend on future events that are highly uncertain and cannot be predicted*

The COVID-19 pandemic continues to have disruptive and adverse effects in the countries where the Bank operates and, more broadly, on the global economy, supply chains, and financial markets. The pandemic has also had, and could continue to have, repercussions on the Bank, notably on the way in which it carries out its business activities as well as on its operating results, financial position, regulatory capital and liquidity ratios, reputation, and ability to satisfy regulatory requirements, as well as on its clients, which could exacerbate certain top and emerging risks to which the Bank is exposed. Since a large part of the Bank's activities consist of granting loans or providing various liquidity channels to clients, namely, to individuals, businesses in various sectors, and governments, the impacts of the pandemic on these parties, including on Borrowers of underlying Loans in the Covered Bond Portfolio, could also significantly influence the provisions for credit losses recorded by the Bank. Further details on the Loans and the Covered Bond Portfolio can be found in the section of the Prospectus entitled "*The Covered Bond Portfolio*". As the pandemic evolves, certain industries and geographic sectors have been facing more persistent consequences thereof. The Bank has therefore continued to closely monitor the situation and, given the considerable degree of uncertainty surrounding the post-pandemic landscape, additional mitigation measures may be needed. The actual impacts will depend on future events that are highly uncertain, including the extent, severity, and duration of the COVID-19 pandemic, and on the effectiveness of actions and measures taken by governments, monetary authorities, and regulators over the long term."

c) The risk factor entitled "*Environmental, social and governance (ESG) approach and climate change*" is deleted and replaced with the following:

"*Environmental, social and governance (ESG) approach and climate change*

Environmental and social risk is the possibility that environmental and social matters would result in a financial loss for the Issuer or affect its business activities. This risk encompasses many topics, in particular pollution and waste; the use of energy, water, and other resources; climate change; biodiversity; human rights; inclusion and diversity; labour standards; community health; occupational health and safety; the rights of Indigenous Peoples and consultation thereof; as well as cultural heritage. The Issuer's business and operations are subject to increasing scrutiny from customers, employees, investors and other stakeholders to address risks related to these topics. If the Issuer's response is deemed inadequate or non-compliant with commitments, it could increase the Issuer's exposure to strategic, reputation, and regulatory compliance risks. The Issuer is directly exposed to such risk through its own activities and indirectly exposed through the activities of its clients.

Assessing and mitigating environmental and social risk are integral parts of the Issuer's risk management framework. Environmental and social issues are now central to the Issuer's decision-making process and are becoming increasingly strategic matters for the Issuer. Taking these risks into consideration could even be viewed as a considerable asset in certain financing or investment transactions, and doing so also contributes to promoting exemplary practices to the Issuer's stakeholders.

The Issuer has adopted environmental, social and governance ("ESG") principles that show the importance it attaches to sustainable development and to balancing the interests of societal stakeholders. These ESG principles have already been incorporated into the organization's priorities. ESG indicators have also been added to various monitoring dashboards and are gradually being integrated into the risk appetite framework. Reports on these indicators and on the Issuer's ESG commitments are periodically presented to several Board committees. Notwithstanding the Issuer's efforts, there can be no assurance that an ESG-related issue will not occur which could lead to a loss in financial or operating value or harm the Issuer's reputation or have an impact on its stakeholders.

The Issuer has also implemented an environmental policy that applies to all activities and decisions made across the Issuer. This policy clearly sets out the principles used to identify and limit environmental risk and climate risk as well as the impacts therefrom on the community and on the Issuer's business segments. To proactively ensure the strategic positioning of its entire portfolio, the Issuer continues to express its commitment to support the transition towards a low-carbon economy while continuing to closely monitor related developments and implications.

Accordingly, the Issuer supports a wide range of sustainable development initiatives and further demonstrates its commitment by deploying many initiatives that incorporate environmental and social topics into its business and operational decisions. These efforts also entail a continuous and stronger adaptation, as well as additional mitigation measures, in the event of an interruption or disruption of its activities due to major crises such as natural disasters or health crises.

ESG factors continue to be integrated into the Issuer's processes as part of the implementation of its strategy and guiding principles approved by the Board. This integration is being conducted with due diligence, specifically in the area of the credit-granting process, starting with the corporate credit portfolio. For this clientele, the ESG risk analysis framework calls for the collection of information on carbon emissions and includes a climate risk classification based on industry as well as scores assigned by ESG rating agencies.

In accordance with the Task Force on Climate-Related Financial Disclosures' ("TCFD") recommendations, the Issuer has identified two types of direct climate-change-related risks; physical risks and transition risks. Physical risks refer to the potential impacts of more frequent and more intense extreme weather events and/or of chronic changes in weather conditions on physical assets, infrastructures, the value chain, productivity, and other physical aspects. Transition risks refer to the potential impacts of moving toward a low-carbon economy (such as technological changes, behavioural changes by consumers, or political or public policy shifts designed to reduce GHG emissions through taxes or incentives) as well as to regulatory changes made to manage and support such an economy. In addition to these two risks are indirect risks, such as the risk of lawsuits, reputation risk, and regulatory compliance risk in an environment that is constantly changing due to ongoing and upcoming initiatives enacted by governments and regulators. Climate risk could have an impact on the traditional risks that are inherent to a financial institution such as the Issuer's operations, including credit risk, market risk, liquidity and funding risk, and operational risk, among others.

Managing climate risk has become increasingly important, as evidenced by the interest level in this risk, aligned over a societal, political, and regulatory landscape in constant flux, shown by the Issuer's stakeholders, in particular clients, shareholders, governments, and regulators. In 2022, several initiatives and public consultations were announced, including OSFI's guideline B-15, *Climate Risk Management*, the International Sustainability Standards Board's initiative to establish a financial disclosure framework addressing sustainability and climate; and the CSA's proposed *National Instrument 51-107 – Disclosure of Climate–related matters*. Other announcements include the Government of Canada's *2030 Emissions Reduction Plan* and the Government of Quebec's *Plan for a Green Economy*.

It is possible that the Issuer's or its clients' business models fail to align with a low-carbon economy or that their responses to government strategies and regulatory changes prove inadequate or fail to achieve the target objectives. Another possibility is that events caused by physical risks prove catastrophic (extreme episodes) or that there are adaptability issues (chronic episodes). As such, these risks could result in financial losses for the Issuer, affect its business activities and how they are conducted, harm its reputation and increase its regulatory compliance risk, or even affect the activities and financial position of the clients to whom it offers financial services.

The actual impact of climate risk will depend on future events that are beyond the Issuer's control. The Issuer must therefore devote special attention to reducing its exposure to these negative outside factors and, at the same time, to seizing new growth opportunities. Its strategies and policies have therefore been designed to consider climate risks while also supporting the transition to a low-carbon economy. The Issuer constantly strives to remain apprised of best practices and to support and advise its clients in their move to a low-carbon economy. From this perspective, the Issuer will continue to deliver climate risk management training across the organization, in particular among front-line employees who have direct contact with clients. To better understand and mitigate climate change risks, the Issuer also takes part in major national and international financial initiatives, including TCFD, the United Nations Principles for Responsible Banking (UNPRB), the United Nations Principles for Responsible Investing (UNPRI), and others.

However, the Issuer cannot predict the effectiveness of government-led climate strategies or of regulatory changes enacted, nor can it assume responsibility for achieving the objectives set out in these strategies and changes.

The Issuer continues to closely monitor developments on this topic and to deploy its climate change risk management framework.

Further details on the ESG and climate change risks the Issuer faces and its approach to management of those risks can be found on page 71 of the Issuer's 2022 Annual Report, which is incorporated by reference in this Prospectus."

d) The following new risk factor is added to the Prospectus in the subcategory entitled "*Operational and Strategic Risk*", following the risk factor entitled "*Failure to obtain accurate and complete information from or on behalf of the Issuer's clients and counterparties could adversely affect the Issuer's results*":

"*Protection of Personal Information*

Risks related to protecting personal information exist through the entire lifecycle of information and arise, in particular, from inadequate control measures and weak processes. Such risks could also arise from information being improperly created, collected, used, communicated, stored, or destroyed. Greater attention will be paid to the collection, use, and communication of personal information as well as the management and governance applied to such information as the Issuer continues to invest in technological solutions and innovations and according to the evolution of its commercial activities.

In recent years, innovations and the proliferation of technological solutions that collect, use, and communicate personal information such as cloud computing, artificial intelligence, automated learning and open banking, have given rise to significant legislative changes in many jurisdictions, including in Canada and Quebec, the Issuer's main operational jurisdictions. For example, in September 2021, the Quebec government passed An Act to modernize legislative provisions as regards the protection of personal information, which will gradually come into effect over the next three years and on June 16, 2022, the Canadian federal government tabled Bill C-27 entitled Digital Charter Implementation Act, 2022, which aims to enhance and modernize the personal information protection framework.

The Issuer continues to monitor relevant legislative developments and has bolstered its governance structure by updating its policies, standards and practices and by deploying a personal information privacy program that reflects its determination to maintain the trust of its clients.

There can be no guarantee that the Issuer's policies, standards and practices will be sufficient to prevent any of the risks described above related to the protection of personal information. Should any such risks materialise, it could cause the Issuer to be subject to client attrition; financial loss; non-compliance with legislation; legal disputes; fines; penalties; punitive damages; regulatory action; reputational damage; compliance, remediation, investigative, or restoration costs; cost hikes to maintain and upgrade technological infrastructures and systems, all of which could affect the Issuer's operating results or financial position, in addition to having an impact on its reputation."

## III. SARON RELATED AMENDMENTS

By virtue of this Supplement, the following sections of the Prospectus are amended as follows:

### A. Cover Page

i. The notice regarding the Benchmarks Regulation in the sixth paragraph on the cover page is deleted and replaced with the following:

"Amounts payable under the Covered Bonds may be calculated by reference to the Euro Inter-Bank Offered Rate ("**EURIBOR**"), the Sterling Overnight Index Average ("**SONIA**"), the Secured Overnight Financing Rate ("**SOFR**"), the Euro Short-term Rate ("**€STR**") or Swiss Average Overnight Rate ("**SARON**") which are provided by the European

Money Markets Institute ("**EMMI**"), the Bank of England, the Federal Reserve Bank of New York ("**FRBNY**"), the European Central Bank and SIX Index AG, respectively. As at the date of this Prospectus, the EMMI appears on the register of administrators and benchmarks (the "**Register**") established and maintained by the Financial Conduct Authority pursuant to Article 36 of Regulation (EU) 2016/1011 (the "**EU Benchmarks Regulation**") as it forms part of domestic law by virtue of the EUWA (the "**UK Benchmarks Regulation**" and, together with the EU Benchmarks Regulation, the "**Benchmarks Regulations**"). As at the date of this Prospectus, none of the Bank of England, FRBNY, the European Central Bank or SIX Index AG appears on the Register. As far as the Issuer is aware, the transitional provisions of Article 51 of the UK Benchmarks Regulation apply such that SIX Index AG is not currently required to obtain recognition, endorsement or equivalence and the Bank of England, as administrator of SONIA, the FRBNY, as administrator of SOFR and the European Central Bank, as administrator of €STR are not required to be registered by virtue of Article 2 of the UK Benchmarks Regulation."

**B. Risk Factors**

i. The following new risk factor entitled "*The market continues to develop in relation to SARON as a reference rate for Covered Bonds*" is added to the section entitled "*Risk Factors – 5. Factors Which Are Material for the Purpose of Assessing Risks Related to a Particular Issue of Covered Bonds – (a) Risks related to Floating Rate Covered Bonds"* before the risk factor entitled *"Changes or uncertainty in respect of interest rates and indices that are deemed "benchmarks" may adversely affect the value or payment of interest under the Covered Bonds, including where such benchmarks may not be available"*

"***The market continues to develop in relation to SARON as a reference rate for Covered Bonds***

Where the applicable Final Terms for a Series of Covered Bonds specifies that the interest rate for such Covered Bonds will be determined by reference to SARON, interest will be determined on the basis of SARON (as defined in the Conditions). The interest rate in respect of Covered Bonds with SARON as a Reference Rate will be determined on the basis of Compounded Daily SARON (as defined in the Conditions), which is a backwards-looking, compounded risk-free overnight rate.

Investors should be aware that the market continues to develop in relation to the daily SARON as a reference rate in the capital markets and its adoption as an alternative to CHF LIBOR. Furthermore, the market or a significant part thereof may adopt an application of SARON as a reference rate that differs significantly from that set out in the Conditions and the Issuer may in the future issue Covered Bonds referencing SARON that differ materially in terms of interest determination when compared with any previous SARON referenced Covered Bonds issued by it. The development of SARON as a reference rate, as well as continued development of SARON-based rates for such markets and the market infrastructure for adopting such rates, could result in reduced liquidity or increased volatility or could otherwise affect the market price of Covered Bonds with SARON as a Reference Rate.

The interest rate for Covered Bonds with SARON as a Reference Rate is only be capable of being determined shortly before the end of the relevant Observation Period and immediately prior to the relevant Interest Payment Date. Consequently, it may be difficult for investors in Covered Bonds with SARON as a Reference Rate to estimate reliably the amount of interest that will be payable on such Notes, and some investors may be unable or unwilling to trade such Covered Bonds without changes to their IT systems, both of which factors could adversely impact the liquidity of such Covered Bonds. Further, if any Covered Bonds become due and payable prior to their stated maturity, the final interest rate payable in respect of such Covered Bonds shall only be determined immediately prior to the date on which the Covered Bonds become due and payable.

In addition, the manner of adoption or application of SARON reference rates in the debt capital markets may differ materially when compared with the application and adoption of SARON in other markets, such as the derivatives and loan markets. Investors should carefully consider how any mismatch between the adoption of SARON reference rates across these markets may impact any hedging or other financial arrangements, if any, which they may put in place in connection with such Covered Bonds.

To the extent the SARON Reference Rate is discontinued or is no longer published as described in the Conditions, the applicable rate to be used to calculate the Rate of Interest on such Covered Bonds will be determined using the alternative methods described in Condition 13.02(c)(iii). Any of these fallbacks may result in interest payments that are lower than, or do not otherwise correlate over time with, the payments that would have been made on the Covered Bonds if the SARON Reference Rate had been provided by the SIX Index AG in its form as at the Issue Date of the Covered Bonds. Any such consequences could have an adverse effect on the value and marketability of, and return on, such Covered Bonds.

An investment in Covered Bonds with SARON as the Reference Rate may entail significant risks not associated with similar investments in conventional debt securities. Any investor should ensure it understands the nature of the terms of such Covered Bonds and the extent of its exposure to risk."

ii. A reference to "SARON" is added following the reference to "SONIA" in the subparagraph (c)(ii) to the risk factor entitled "*Risk Factors – 5. Factors Which Are Material for the Purpose of Assessing Risks Related to a Particular Issue of Covered Bonds – (a) Risks related to Floating Rate Covered Bonds - Changes or uncertainty in respect of interest rates and indices that are deemed "benchmarks" may adversely affect the value or payment of interest under the Covered Bonds, including where such benchmarks may not be available – (ii) Fallback arrangements under the Programme*".

**C. Terms and Conditions of the Covered Bonds**

i. The subtitle and first paragraph of Condition 5.03 entitled "*Interest on Floating Rate Covered Bonds – Interest Payment Dates – Rate of Interest – Other than SONIA, SOFR or €STR*" is amended by deleting the "or" before "€STR" and adding "or SARON" after "€STR".

ii. The following new subsection shall be inserted in Condition 5.03 immediately after the subsection entitled "*Terms and Conditions of the Covered Bonds – Interest – Interest on Floating Rate Covered Bonds – Interest Payment Dates – Rate of Interest – €STR*":

***"Rate of Interest – SARON***

Where the Screen Rate Determination is specified in the applicable Final Terms as the manner in which the Rate of Interest is to be determined, and the Reference Rate is specified in the applicable Final Terms as being SARON, then the Rate of Interest for each Interest Period will, subject as provided below and subject to the provisions of Condition 13.02, be Compounded Daily SARON plus or minus the Margin (as indicated in the applicable Final Terms) as determined by the Calculation Agent.

"**Compounded Daily SARON"** means, with respect to an Interest Period, the rate of return of a daily compound interest investment (with the daily overnight interest rate of the secured funding market for Swiss franc) as calculated by the Calculation Agent on the relevant Interest Determination Date in accordance with the following formula (and the resulting percentage will be rounded, if necessary, to the nearest one tenthousandth of a percentage point, with 0.00005 being rounded upwards):

$$\left[\prod_{i=1}^{d_b}\left(1+\frac{SARON_i \times n_i}{360}\right)-1\right] \times \frac{360}{d_c}$$

where:

"***db"*** means the number of Zurich Banking Days (as defined below) in the relevant Observation Period;

"**dc*"*** is the number of calendar days in the relevant Observation Period;

"***i***" is a series of whole numbers from one to *db*, representing the Zurich Banking Days in the relevant Observation Period in chronological order from, and including, the first Zurich Banking Day in such Observation Period;

"**n*i***" for any Zurich Banking Day "*i*" is the number of calendar days from, and including, such Zurich Banking Day "*i*" up to, but excluding, the first following Zurich Banking Day;

"**Observation Look-Back Period**" is as specified in the applicable Final Terms;

"**Observation Period**" means, in respect of an Interest Period, the period from, and including, the date falling "p" Zurich Banking Days prior to the first day of such Interest Period and ending on, but excluding, the date falling "p" Zurich Banking Days prior to the Interest Payment Date for such Interest Period;

"**p**", for any Interest Period, is the number of TARGET2 Business Days included in the Observation Look-Back Period, as specified in the applicable Final Terms;

"**SARONi**" means, in respect of any Zurich Banking Day , SARON for such Zurich Banking Day;

"**SARON**" means, in respect of any Zurich Banking Day, the Swiss Average Rate Overnight for such Zurich Banking Day published by the SARON Administrator on the SARON Administrator Website at the Relevant Time on such Zurich Banking Day; or

(i) if SARON does not so appear on the SARON Administrator Website or is not so published by the Relevant Time on such Zurich Banking Day and a SARON Index Cessation Event and a SARON Index Cessation Effective Date have not both occurred on or prior to such Zurich Banking Day, the Swiss Average Rate Overnight published by the SARON Administrator on the SARON Administrator Website for the first preceding Zurich Banking Day on which the Swiss Average Rate Overnight was published by the SARON Administrator on the SARON Administrator Website; or

(ii) if such rate does not so appear on the SARON Administrator Website or is not so published by the Relevant Time on such Zurich Banking Day and a SARON Index Cessation Event and a SARON Index Cessation Effective Date have both occurred on or prior to such Zurich Banking Day, then SARON shall be determined to be the SARON Replacement determined in accordance with Condition 13.2 (c)(iii).

If the relevant Series of Covered Bonds become due and payable in accordance with Condition 7, the final Interest Determination Date shall, notwithstanding any Interest Determination Date specified in the applicable Final Terms, be deemed to be the date on which such Covered Bonds become due and payable, and the Rate of Interest on such Covered Bonds shall, for so long as such Covered Bonds remain outstanding, be that determined on such date and as if (solely for the purpose of such interest determination) the relevant Interest Period had been shortened accordingly.

iii. The following defined terms in Condition 5.09 are amended as follow:

a) "Interest Determination Date" is amended by adding the following as new (e) and the current (e) is renamed accordingly:

"(e) in the case of SARON, the fifth Zurich Banking Day prior to the end of each Interest Period;" and

b) "Reference Rate" is amended by adding the word "SARON" after "€STR".

iv. Condition 13.02(c) is amended by adding the following new sub-paragraph "(iii)" at the end of Condition 13.02(c):

"*(iii) Effect of a SARON Index Cessation Event on SARON-referenced Floating Rate Covered Bonds*

If the Issuer or its designee determines on or prior to the Reference Time that a SARON Index Cessation Event and its related SARON Index Cessation Effective Date (each as defined below) have occurred with respect to SARON-referenced Covered Bonds, then the Bond Trustee shall be obliged, without the consent or sanction of the Covered Bondholders (including without the requirement to provide to Covered Bondholders an opportunity to object) and subject to the consent only of the Secured Creditors (x) party to the relevant Transaction Document being amended or (y) whose ranking in any Priorities of Payments is affected, subject to satisfaction of Condition 13.02(c)(iii)(D) (the "**Benchmark Transition Event Conditions**"), to concur with the Issuer or its designee in making any modification (other than in respect of a Series Reserved Matter, provided that neither replacing SARON with the SARON Replacement nor any SARON Replacement Conforming Changes (each as defined below) shall constitute a Series Reserved Matter) of these Conditions or any of the Transaction Documents solely with respect to any SARON-referenced Floating Rate Covered Bonds that the Issuer or its designee decides may be appropriate to give effect to the provisions set forth under this Condition 13.02(c)(iii) in relation only to all determinations of the rate of interest payable on any SARON-referenced Floating Rate Covered Bonds (and any related swap agreements), provided that:

*(A)* *Benchmark Replacement*. If the Issuer or its designee determines that a SARON Index Cessation Event and its related SARON Index Cessation Effective Date have occurred prior to the Relevant Time in respect of any determination of SARON on any date applicable to any SARON-referenced Floating Rate Covered Bonds, subject to satisfaction of the Benchmark Transition Event Conditions, the SARON Replacement will replace SARON for all purposes relating to any Floating Rate Covered Bonds calculated by reference to SARON in respect of such determination on such date and all determinations on all subsequent dates;

*(B)* *SARON Replacement Conforming Changes*. In connection with the implementation of a SARON Replacement with respect to any Floating Rate Covered Bonds calculated by reference to SARON, the Issuer or its designee will have the right, subject to satisfaction of the Benchmark Transition Event Conditions, to make SARON Replacement Conforming Changes with respect to any SARON-referenced Floating Rate Covered Bonds from time to time;

*(C)* *Decisions and Determinations.* Any determination, decision or election that may be made by the Issuer or its designee pursuant to this Condition 13.02(c)(iii), 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, in each case, solely with respect to any Floating Rate Covered Bonds calculated by reference to SARON:

(I) will be conclusive and binding absent manifest error;

(II) if made by the Issuer, will be made in the Issuer's sole discretion;

(III) if made by the Issuer's designee, will be made after consultation with the Issuer, and the designee will not make any such determination, decision or election to which the Issuer objects; and

(IV) shall become effective without consent, sanction or absence of objection from the Covered Bondholders or any other party, except as otherwise provided in this Condition 13.02(c)(iii).

Any determination, decision or election pursuant to the benchmark replacement provisions not made by the Issuer's designee will be made by the Issuer on the basis as described above. The designee shall have no liability for not making any such determination, decision or election absent bad faith or fraud.

In no event shall the Calculation Agent or Swiss Paying Agent be the "designee" of the Issuer nor be responsible for determining any substitute for SARON, or for making any adjustments to any alternative benchmark or spread thereon, the business day convention, interest determination dates or any other relevant methodology for calculating any such substitute or successor benchmark. In connection with the foregoing, the Calculation Agent will be entitled to conclusively rely on any determinations made by the Issuer or its designee and will have no liability for such actions taken at the direction of the Issuer or its designee.

None of the Swiss Paying Agent or the Calculation Agent will have any liability for any determination made by or on behalf of the Issuer or its designee in connection with a SARON Index Cessation Event or a SARON Replacement.

*(D)* *Other conditions.*

(I) The Issuer shall certify in writing to the Bond Trustee, the Swiss Paying Agent and the Calculation Agent in writing (such certificate, a "**SARON Base Rate Modification Certificate**") that (I) a SARON

Index Cessation Event and its related SARON Index Cessation Effective Date have occurred specifying the SARON Replacement; and (II) that the SARON Replacement Conforming Changes have been made in accordance with this Condition 13.02(c)(iii);

(II) The Issuer shall have obtained the consent of each Secured Creditor (x) which is party to the relevant Transaction Document being amended, or (y) whose ranking in any Priorities of Payments is affected has been obtained (evidence of which shall be provided by the Issuer to the Bond Trustee with the SARON Base Rate Modification Certificate) and no other consents are required to be obtained in relation to the SARON Replacement, provided, for the avoidance of doubt, that the Calculation Agent and the Swiss Paying Agent, as Secured Creditors, shall not be obliged to agree to any SARON Replacement Conforming Changes to any Transaction Documents, which, in the sole opinion of such Calculation Agent or the Swiss Paying Agent, as the case may be, would impose more onerous obligations upon it or expose it to any additional duties, responsibilities or liabilities or reduce or amend the protective provisions afforded to any such person in the Agency Agreement;

(III) With respect to each Rating Agency, a Rating Agency Confirmation (as defined in Condition 20) has been obtained; and

(IV) The Issuer shall pay (or arrange for the payment of) all fees, costs and expenses (including legal fees) properly incurred by the Bond Trustee in connection with such SARON Replacement.

*(E) Definitions. The following definitions shall apply with respect to this Condition 13.02(c)(iii):*

"**designee**" means an affiliate or other agent of the Issuer designated by the Issuer.

"**Recommended Replacement Rate**" means the rate that has been recommended as the replacement for the Swiss Average Rate Overnight by any working group or committee in Switzerland organized in the same or a similar manner as the National Working Group on Swiss Franc Reference Rates that was founded in 2013 for purposes of, among other things, considering proposals to reform reference interest rates in Switzerland (any such working group or committee, the "**Recommending Body**").

"**Recommended Adjustment Spread**" means, with respect to any Recommended Replacement Rate, the spread (which may be positive, negative or zero), or formula or methodology for calculating such a spread,

(a) that the Recommending Body has recommended be applied to such Recommended Replacement Rate in the case of fixed income securities with respect to which such Recommended Replacement Rate has replaced the Swiss Average Rate Overnight as the reference rate for purposes of determining the applicable rate of interest thereon; or

(b) if the Recommending Body has not recommended such a spread, formula or methodology as described in clause (a) above, to be applied to such Recommended Replacement Rate in order to reduce or eliminate, to the extent reasonably practicable under the circumstances, any economic prejudice or benefit (as applicable) to Holders as a result of the replacement of the Swiss Average Rate Overnight with such Recommended Replacement Rate for purposes of determining SARON, which spread will be determined by the Calculation Agent, acting in good faith and a commercially reasonable manner, and be consistent with industry-accepted practices for fixed income securities with respect to which such Recommended Replacement Rate has replaced the Swiss Average Rate Overnight as the reference rate for purposes of determining the applicable rate of interest thereon.

"**Relevant Time**" means, in respect of any Zurich Banking Day, close of trading on SIX Swiss Exchange on such Zurich Banking Day, which is expected to be on or around 6 p.m. (Zurich time);

"**SARON Administrator**" means SIX Swiss Exchange or any successor administrator of SARON;

"**SARON Administrator Website**" means the website of the SARON Administrator;

"**SARON Index Cessation Event**" means the occurrence of one or more of the following events:

(a) a public statement or publication of information by or on behalf of the SARON Administrator, or by any competent authority, announcing or confirming that the SARON Administrator has ceased or will cease to provide the Swiss Average Rate Overnight permanently or indefinitely, provided that, at the time of such statement or publication, there is no successor administrator that will continue to provide the Swiss Average Rate Overnight; or

(b) a public statement or publication of information by the SARON Administrator or any competent authority announcing that (x) the Swiss Average Rate Overnight is no longer representative or will as of a certain date no longer be representative, or (y) the Swiss Average Rate Overnight may no longer be used after a certain date, which statement, in the case of subclause (y), is applicable to (but not necessarily limited to) fixed income securities and derivatives.

"**SARON Index Cessation Effective Date**" means, in respect of a SARON Index Cessation Event, the earliest of:

(a) (in the case of a SARON Index Cessation Event described in clause (a) of the definition thereof) the date on which the SARON Administrator of the Swiss Average Rate Overnight ceases to provide the Swiss Average Rate Overnight;

(b) (in the case of a SARON Index Cessation Event described in clause (b)(x) of the definition thereof) the latest of

(i) the date of such statement or publication;

(ii) the date, if any, specified in such statement or publication as the date on which the Swiss Average Rate Overnight will no longer be representative; and

(iii) if a SARON Index Cessation Event described in clause (b)(y) of the definition of SARON Index Cessation Event has occurred on or prior to either or both dates specified in subclauses (i) and (ii) of this clause (b), the date as of which the Swiss Average Rate Overnight may no longer be used; and

(c) (in the case of a SARON Index Cessation Event described in clause (b)(y) of the definition thereof) the date as of which the Swiss Average Rate Overnight may no longer be used.

"**SARON Replacement**" means (i) the Recommended Replacement Rate, giving effect to the Recommended Adjustment Spread, if any or (ii) if there is no Recommeneded Replacement Rate within one Zurich Business Day of the SARON Index Cessation Effective Date, the policy rate of the Swiss National Bank (the "**SNB Policy Rate**") for such Zurich Banking Day, giving effect to the SNB Adjustment spread, if any.

"**SARON Replacement Conforming Changes**" means, with respect to any SARON Replacement, any technical, administrative or operational changes (including without limitation changes to the definition of "Interest Period", determination dates, timing and frequency of determining rates and making payments, rounding of amounts, or tenors, and other administrative matters) that the Issuer or its designee decides may be appropriate to reflect the adoption of such SARON Replacement in a manner substantially consistent with market practice (or, if the Issuer or its designee decides that adoption of any portion of such market practice is not administratively feasible or if the Issuer or its designee determines that no market practice for use of the SARON Replacement exists, in such other manner as the Issuer or its designee) determines is reasonably necessary).

"**SIX Swiss Exchange**" means SIX Swiss Exchange AG and any successor thereto;

"**SNB Adjustment Spread**" means, with respect to the SNB Policy Rate, the spread to be applied to the SNB Policy Rate in order to reduce or eliminate, to the extent reasonably practicable under the circumstances, any economic prejudice or benefit (as applicable) to Holders as a result of the replacement of the Swiss Average Rate Overnight with the SNB Policy Rate for purposes of determining SARON, which spread will be determined by the Calculation Agent, acting in good faith and a commercially reasonable manner, taking into account the historical median between the Swiss Average Rate Overnight and the SNB Policy Rate during the two year period ending on the date on which the SARON Index Cessation Event occurred (or, if more than one SARON Index Cessation Event has occurred, the date on which the first of such events occurred); and

"**Zurich Banking Day**" means a day on which banks are open in the City of Zurich for the settlement of payments and of foreign exchange transactions.

*(F)* *Conflict.* To the extent that there is any inconsistency between the conditions set out in Condition 13.2(c)(iii) and any other Condition, the statements in this section shall prevail with respect to any Floating Rate covered bonds calculated by reference to SARON.

Without prejudice to the obligations of the Issuer under this Condition 13.2(c)(iii), SARON and the temporary fallback provisions provided for in Condition 5.03 will continue to apply unless and until the Bond Trustee has received the SARON Base Rate Modification Certificate in accordance with this Condition 13.2(c)(iii). For the avoidance of doubt, this Condition 13.2(c)(iii) shall apply to the determination of the Interest Rate on the relevant Interest Determination Date, and the Rate of Interest applicable to any subsequent Interest Period(s) is subject to the operation of, and to adjustment as provided in, this Condition 13.2 (c)(iii)."

**D. Pro Forma Final Terms**

The following line items in Part A – Contractual Terms are amended as follows:

i. 9. - Interest Basis, "[SARON]" is added after "[€STR]".

ii. 15.(vii) - Reference Rate, "[SARON]" is added after "[€STR]".

iii. 15.(vii) - Observation Look-Back Period, "[[ ] Zurich Banking Days]" is added before "[Not Applicable]"

iv. 15.(vii) - Interest Determination Date(s), "[[ ] Zurich Banking Days prior to the end of each Interest Period]]" is added after "[[] TARGET2 Business Days prior to the end of each Interest Period]].

**E. Glossary**

The following new defined terms are added in alphabetical order as follows:

"**Compounded Daily SARON**"........................................................has the meaning given in Condition 5.03;

"**SARON**"...........................................................................................Swiss Average Overnight Rate;

**GENERAL**

To the extent that any document or information incorporated by reference in this Supplement, itself incorporates any information by reference, either expressly or impliedly, such information will not form part of this Supplement for the purposes of the UK Prospectus Regulation, except where such information or documents are stated within this Supplement as specifically being incorporated by reference or where this Supplement is specifically defined as including such information.

Copies of this Supplement, the Prospectus and the documents incorporated by reference in either can be (i) viewed on the website of the Regulatory News Service operated by the London Stock Exchange at *http://www.londonstockexchange.com/exchange/news/market-news/market-news-home.html* under the name of the Bank and the headline "Publication of Prospectus"; (ii) viewed on the Bank's website at *https://www.nbc.ca/en/about-us/investors/investor-relations/capital-debt-information/debt/legislative-covered-bonds-program/legislative-covered-bonds.html*; and (ii) obtained without charge from the Bank at 600 De La Gauchetière Street West, Montréal, Québec, Canada H3B 4L2, Attention: Investor Relations and the specified office each Paying Agent set out at the end of the

Prospectus. No website referred to herein nor any information contained thereon, forms part of this Supplement, nor have the contents of any such website been approved by or submitted to the FCA, unless, in each case, such website or information is expressly incorporated by reference in this Supplement.