Capital Markets

Interbank Offered Rate Transition

JUNE 2022

INTERBANK OFFERED RATE TRANSITION

This document is meant to assist in updating you about the transition of key global benchmark interest rates and the possible impact on products that you may have with RBC Financial Group ("RBC").[1]

What is happening to interest rates?

A number of interbank offered rates ("**IBORs**") are being reformed to make them more robust and reliable or, in some cases, are being discontinued. Where the IBORs are being reformed they are expected to perform differently from the way they currently perform. The reform or discontinuation in turn may have an impact on the payments under and/or the value of the RBC products you currently use, and those RBC may provide you with in the future.

Regulatory authorities and public and private sector working groups in several jurisdictions have strongly encouraged the identification and use of alternative "risk-free rates" ("**RFRs**") to replace (or, in some cases, to be used alongside) certain IBORs. These working groups have also published recommendations which consider how to support a transition to, and the development of new products referencing, these RFRs.

What are "risk-free rates" or "RFRs"?

RFRs are overnight interest rate benchmarks which are perceived to (i) in some cases, be more representative and reliable than an IBOR and (ii) be more appropriate for use in certain products than an IBOR.

How are RFRs different from IBORs?

RFRs are overnight rates based on actual transactions, while IBORs are quoted term rates that may rely, in part, on expert judgment.

Is the same thing happening to interest rates for all currencies?

No. For some currencies, a "multiple rate" approach is being adopted, which means that the IBOR for the relevant currency will continue alongside the RFR. For other currencies, it is likely that the IBOR will cease to be provided or be non-representative and so the principal interest rate will be the RFR.

The table below shows the approach taken for IBORs for the principal currencies in which RBC products are denominated:

Currency	Impacted	Reform/discontinuation	RFR	Multiple rate approach
GBP	LIBOR	The Financial Conduct Authority (the "FCA") announced on March 5, 2021 (the "**March FCA Announcement**") the future cessation or loss of representativeness of all 35 LIBOR benchmark settings currently published by ICE Benchmark Administration ("**IBA**").[2] This announcement follows the notification by IBA to the FCA that it intends to cease providing all LIBOR settings for all currencies, subject to any rights of the FCA to compel IBA to continue publication.[3] The FCA has also, in September 2021, confirmed that it will require ongoing publication of the 1, 3 and 6 month GBP and JPY LIBOR settings under an alternative methodology, commonly referred to as 'synthetic LIBOR'. Further details are on page 3.	SONIA	No
CHF			SARON	No
JPY			TONA	Yes, consisting of TONA and JPY TIBOR
USD			SOFR	No
EUR			€STR	Yes, consisting of EURIBOR and €STR
EUR	EURIBOR	Reforms to the methodology underpinning EURIBOR to ensure compliance with regulatory requirements have been implemented. EURIBOR (as revised) is currently expected to continue. [4]	€STR	Yes, consisting of EURIBOR and €STR
EUR	EONIA	As of October 2, 2019, EONIA methodology has been recalibrated to become the sum of €STR plus a fixed spread of 8.5 basis points. EONIA was discontinued on January 3, 2022.[5]	€STR	Yes, consisting of EURIBOR and €STR
AUD	BBSW	The calculation of BBSW has since May 21, 2018 used a re- formed VWAP methodology, and it is expected that BBSW (as revised) will continue.[6]	RBA Cash Rate	Yes, consisting of BBSW and RBA Cash Rate
CAD	CDOR	6-month and 12-month CDOR tenors have ceased to be calculated and published from May 17, 2021.[7] The administrator of CDOR, Refinitiv Benchmark Services Limited ("**RBSL**") has also announced that all remaining CDOR tenors will cease to be published immediately following June 28, 2024.[8] Changes have also been made to enhance the methodology underlying CORRA.[9] The Canadian Alternative Reference Rate working group (the "**CARR**") published recommendations to facilitate the use of CORRA on November 23, 2021.[10] The CARR has also launched a consultation on a potential term rate (i.e. Term CORRA) to replace CDOR in certain loan and hedging agreements.[11]	Enhanced CORRA	No

A number of RFRs have been introduced. For example, the Secured Overnight Financing Rate ("**SOFR**") has been introduced as the new RFR for USD and the Euro Short Term Rate ("**€STR**") has been introduced as the new RFR for EUR.

You should be aware that RBC is a contributor to CDOR and USD LIBOR. If any contributor (including Royal Bank of Canada) ceases to contribute to CDOR or USD LIBOR, it will increase the likelihood that:

- USD LIBOR will cease to be provided or that it will be considered to be unrepresentative of the market it is intended to measure prior to June 30, 2023; or
- CDOR will cease to be provided or that it will be considered to be unrepresentative of the market it is intended to measure prior to June 28, 2024.

What does the March FCA Announcement mean for the phasing out of LIBOR?

The March FCA Announcement confirms (i) that the FCA will not require any panel banks to continue to submit to LIBOR beyond the dates from which they have notified their departure and (ii) that it has no intention of using its proposed powers (which are set out in the Financial Services Act) to compel IBA to continue to publish any of the following 26 LIBOR settings on a 'synthetic' basis and, consequently, (A) the following LIBOR settings ceased to be provided permanently immediately after 31 December 2021: all tenors of EUR LIBOR and CHF LIBOR, the spot next, 1-week, 2-month and 12-month JPY LIBOR settings, the overnight, 1-week, 2-month and 12-month GBP LIBOR settings and the 1-week and 2-month USD LIBOR settings; and (B) the overnight and 12-month USD LIBOR settings will cease to be provided permanently immediately after June 30, 2023.

What do the various FCA Announcements mean in respect of the use of certain Synthetic LIBOR settings?

On September 29, 2021, the FCA confirmed its decision to compel the continued publication of the 1-month, 3-month and 6-month yen LIBOR settings (the "**Three Yen LIBOR Settings**") and the 1-month, 3-month and 6-month sterling LIBOR settings (the "**Three Sterling LIBOR Settings**") (together, the "**Six LIBOR Settings**") on the basis of a changed methodology for 12 months starting immediately after December 31, 2021 (such continued publication, "**Synthetic LIBOR**").[12] The Three Yen LIBOR settings will cease to be published after 30 December 2022 and the ongoing publication of the Three Sterling LIBOR Settings can be reviewed and extended annually for a maximum of 9 further years after the end of 2022.

The FCA confirmed on November 16, 2021[13] that Synthetic LIBOR can be used in all legacy contracts, other than cleared derivatives, that have not been amended at or ahead of the end of December 31, 2021.

Are there any other milestones or timelines to be mindful of in respect of USD LIBOR?

In respect of the overnight, 1-month, 3-month, 6-month and 12-month USD LIBOR settings, the FCA has announced that although these 5 USD LIBOR settings will continue to be published on a representative basis until the end of June 2023, the new use of USD LIBOR will be prohibited from January 1, 2021 subject to certain specified exceptions.[14]

Certain US regulatory agencies released a collective statement encouraging banks to cease entering into new contracts that use USD LIBOR after the end of 2021.[15] Certain US regulatory agencies have issued a statement which set out that, in their view, entering into new contracts referencing USD LIBOR after December 31, 2021 would create serious safety and soundness risks.[16] The Canadian prudential regulator issued a letter outlining its expectation that federally regulated financial institutions will complete their transition to new reference rates prior to the LIBOR cessation dates, stop using USD LIBOR as a reference rate as soon as possible and not enter into new transactions using USD LIBOR as a reference rate after December 31, 2021.[17]

Have any laws been introduced to facilitate transition away from LIBOR?

Laws passed in New York and Alabama aim to address the legal uncertainty associated with the end of USD LIBOR by requiring the use of a "recommended benchmark replacement" as the USD LIBOR fallback where the "contract, security or instrument" governed by the laws of those states either does not have any existing fallback provisions or if the fallback provisions reference a USD LIBOR-based rate. A "recommended benchmark replacement" is a benchmark replacement based on SOFR that has been recommended by a "Relevant Recommending Body" which includes the US Alternative Reference Rates Committee ("**ARRC**"). Recently, the U.S. House of Representatives passed the Adjustable Interest Rate (LIBOR) Act of 2021 which is the Federal legislation modeled after the NY state legislation; this will move to the U.S. Senate for approval. The ARRC has published a statement setting out its benchmark replacement and related recommendations for the 1-week and 2-month USD LIBOR settings.[18]

On February 12, 2021, an amending regulation to the EU Benchmarks Regulation ("**EU BMR**") was published in the Official Journal of the European Union ("**EU**"), entering into force and applying from the following day. The amendments to the EU BMR include statutory override mechanics, giving the European Commission power to designate a replacement benchmark to apply to certain contracts and financial instruments in place of previously agreed benchmarks where the contract or financial instrument either contains no fallback provisions or no "suitable" fallback provisions.

On October 21, 2021, the European Commission published Regulation (EU) 2021/1848 which provides for the designation of €STR as the statutory replacement for EONIA in any contract or financial instrument governed by the laws of an EU member state that does not contain suitable fallback provisions, with a fixed spread adjustment of 0.085%. This regulation entered into force on November 11, 2021 and applies as of January 3, 2022.

The European Commission published Regulation (EU) 2021/1847 which provides for the designation of various SARON tenors (compounded in advance) as the statutory replacement for CHF LIBOR in any contract or financial instrument governed by the laws of an EU member state that does not contain suitable fallback provisions. This regulation entered into force on November 11, 2021 and applies as of January 1, 2022.

In the UK, the Critical Benchmarks (References and Administrators' Liability) Act (the "**Critical Benchmarks Act**") clarifies, as a matter of English (and other UK) law, that contractual references to a critical benchmark should continue to be interpreted as references to that critical benchmark when published in its synthetic form (except to the extent that this is expressly excluded by contract and in respect of certain fallback provisions). This means that, in general, references to 1, 3 and 6 month GBP and Yen LIBOR tenors in contracts governed by English law will be read as references to the relevant synthetic LIBOR tenor.

Are there any other developments with respect to CDOR?

The CARR will implement a two-stage transition plan with respect to CDOR as follows:

- Stage 1: By the end of June 2023, all market participants are expected to transition new derivative and securities transactions from CDOR to overnight CORRA in-arrears. No new CDOR exposure can be booked after that date with limited exceptions including hedging of legacy CDOR derivative or securities exposures and hedging of CDOR referencing loans transacted until June 28, 2024; and
- Stage 2: Market participants would be allowed to transact in new CDOR based loans, with robust CDOR fallbacks, until the cessation of CDOR. Hedging of these CDOR based loans with CDOR based derivatives will be permitted until this date.

The Canadian prudential regulator has also issued a letter outlining its expectations of federally regulated financial institutions with respect to CDOR transition which is consistent with the two-stage transition plan outlined above.[19]

How will your RBC products be affected?

The implications of a reform of an interest rate, particularly if it involves its discontinuation, will differ depending on the product or service that you use.

For example:

1. different products or services have different fallbacks and some may not have fallbacks at all. "Fallbacks" are provisions which contemplate a change or cessation of an interest rate and, for example, provide for the introduction of a new interest rate or means of determining a new interest rate;
2. the operation of a fallback may lead to a change in the value or tax or accounting treatment of the product or service, or the product or service no longer meeting the purpose you originally intended it to serve;
3. it may be necessary to update the terms of some products, to refer to a relevant RFR or to introduce new fallback provisions;
4. replacement of an IBOR with the relevant RFR or a fallback to the relevant RFR may result in your paying more or receiving less than you would have otherwise;
5. replacement of an IBOR with the relevant RFR, fallback to the relevant RFR or entry into of a RFR linked product may mean that you have to update your internal booking and other systems;
6. we may no longer be able to offer you products linked to certain IBORs;
7. RBC will not be entering into any new USD LIBOR referencing contract with you unless the contract falls within certain specified exceptions;
8. if you have not agreed to include fallbacks or actively transition away from LIBOR, the terms of contracts referencing any of the Six LIBOR Settings may operate to reference Synthetic LIBOR after 31 December 2021;
9. we will be offering you products that are linked to RFRs; and
10. there could be divergence in payment and other conventions across products and jurisdictions. This means that there could be mismatches, for example if a derivative is being used to hedge specific exposure under another product.

For further information, please refer to the product specific information contained in Annex 1.

What is RBC doing in relation to interest rate reform and/or discontinuation?

RBC has established a global program and is, amongst other things, (i) identifying the products which reference affected interest rates, (ii) engaging with clients on the consequences of the reform and/or discontinuation, (iii) considering how different products may be affected; and (iv) transitioning to RFRs (where relevant), including by adding fallbacks or actively transitioning LIBOR linked products to RFRs where possible, issuing RFR floating rate notes, trading SOFR, SONIA, €STR and CORRA swaps and providing SOFR and SONIA loans. RBC will also not be entering into any new USD LIBOR referencing contract with you unless the contract falls within certain specified exceptions.

What are the next steps?

RBC will continue to communicate further with you as the situation (including industry solutions) develops. In the meantime, you should raise awareness of these reforms internally, monitor future developments and seek independent professional advice on the potential impact of the reforms (including discontinuation) on your products with RBC as well as your organization more generally. RBC may also contact you to discuss contingency and transitional arrangements. If you hold or are party to a syndicated product, you may also be contacted by other lenders and/ or the facility agent of such product in respect of IBOR fallbacks.

Where can you find more information?

Annex 2 of this document contains details of where you can find additional information on this topic.

Please note that this document is provided to you for information only, is not complete or exhaustive and is based on information reasonably available to RBC as of the time this document has been prepared. RBC is not providing any advice or recommendation or offering any product or service in this document nor is it assuming any responsibility to provide advice. If you think other colleagues in your organization should be made aware of these reforms and/or this document, you may wish to forward this letter to those colleagues.

If you have any specific queries about the information set out in this document, please contact your Sales Representative or email us here.

ANNEX 1 — DERIVATIVES

For additional IBOR alternative reference rates disclosure please also see https://www.rbccm.com/en/legal/dodd-frank-disclosures.page.

What might be the impact on derivatives and what is happening to derivative documentation?

Derivative transactions which reference an IBOR typically incorporate the 2006 ISDA Definitions (or, for older transactions, earlier iterations thereof), as published by the International Swaps and Derivatives Association, Inc. ("**ISDA**")). Pursuant to those definitions and prior to the update of the 2006 ISDA Definitions in January 2021, if the relevant interest rate were to be unavailable, the rate would be determined by reference to quotations from reference banks, with no alternative methodology provided.[20]

However, the 2006 ISDA Definitions generally did not address the consequences of no quotations being provided. If the relevant interest rate were permanently or indefinitely discontinued, it is unlikely that quotations would be provided by reference banks on a large scale and for a prolonged period of time in response to the discontinuance of the relevant IBOR. In this scenario, it may be unclear how payments under and/or the value of a transaction should be calculated. If the transaction is centrally cleared or traded on an exchange, the rules of the relevant central clearing house or exchange may allow it to determine a substitute rate.

There has been, and continues to be, much activity concerning references to benchmarks in derivative transactions among market participants, trade associations and regulators. ISDA has updated the 2006 ISDA Definitions to address IBOR fallbacks ("**IBOR Fallbacks Supplement**") and published the ISDA 2020 IBOR Fallbacks Protocol ("**IBOR Fallbacks Protocol**"). The IBOR Fallbacks Supplement introduces fallback provisions in the definitions of rate options that use certain IBORs as the applicable rate. The fallback provisions would apply if the relevant IBOR ceases to be provided permanently or indefinitely, and, in the case only of London Interbank Offered Rate ("**LIBOR**"), after a determination and announcement by the Financial Conduct Authority that LIBOR is no longer representative (each, an "Index Cessation Event"). In a statement published on March 5, 2021,[21] ISDA noted that the March FCA Announcement constitutes an "Index Cessation Event" in respect of all LIBOR currencies and tenors. The statement also noted that the first London Banking Day on or after January 1, 2022 will constitute an "Index Cessation Effective Date" in respect of all tenors of EUR LIBOR, CHF LIBOR, JPY LIBOR and GBP LIBOR, whereas the first London Banking Day on or after July 1, 2023 will constitute an "Index Cessation Effective Date" in respect of all tenors of USD LIBOR. Similarly, in a statement published on May 16, 2022, ISDA noted that the RBSL announcement of May 16, 2022 with respect to the remaining tenors of CDOR constitutes an "Index Cessation Event" with respect to those tenors of CDOR and the related "Index Cessation Effective Date" for those tenors of CDOR will occur on the first Toronto business day following June 28, 2024. For the purposes of these fallback provisions, if it is not possible to determine a rate using linear interpolation, the applicable rate for the relevant IBOR rate option will first fall back to a term adjusted risk-free rate ("**RFR**") in the same currency plus a spread. The RFR will be adjusted by being compounded in arrears for the relevant term to reflect the fact that the IBOR is a term rate rather than an overnight rate. The purpose of the spread is to account for the fact that IBORs, in contrast to RFRs, include a degree of perceived bank credit risk.

The new IBOR triggers and fallbacks contained in the IBOR Fallbacks Supplement automatically apply to all transactions referencing the 2006 ISDA Definitions that are entered into on or after January 25, 2021 ("**Effective Date**") without any further action needed. Derivative transactions incorporating the 2006 ISDA Definitions entered into prior to the Effective Date will not automatically incorporate the new triggers and fallbacks from the IBOR Fallbacks Supplement. For derivative transactions entered into prior to the Effective Date, ISDA has published the IBOR Fallbacks Protocol, pursuant to which parties can agree to amend those transactions to incorporate the same triggers and fallbacks contained in the IBOR Fallbacks Supplement. By adhering to the IBOR Fallbacks Protocol on the ISDA website, parties can make such amendments to their existing derivative transactions with other adhering parties. Derivatives which are used to hedge a specific product such as a loan may require lender or other consent before any amendment can be made. As adherence to the Protocol has the effect of an amendment, we would encourage you to obtain any required consents before adhering. Please note that the following fourteen RBC entities have adhered to the IBOR Fallbacks Protocol: Royal Bank of Canada, Royal Bank of Canada (Channel Islands) Limited, RBC (Barbados) Trading Bank Corporation, RBC Capital Markets, LLC, RBC CMA LLC, RBC Dominion Securities Inc., RBC Europe Limited, RBC Funds Trust, RBC Global Asset Management Inc., RBC Investor Services Bank S.A., RBC Investor Services Trust, RBC Investor Services Trust Singapore Limited (in its capacity as Trustee of ESR-REIT), RBC Investor Services Trust Singapore Limited as trustee of Keppel REIT and RBC Investor Services Trust Singapore Limited as Trustee of OUE Hospitality Sub-Trust. If you adhere to, or have adhered to, the IBOR Fallbacks Protocol, any in-scope legacy derivatives transactions you have entered into with any of these RBC entities will be amended by the terms of the IBOR Fallbacks Protocol.

Please note that if you have entered into a transaction that references a swap rate with us, then the IBOR Fallbacks Protocol will not apply. If we have not already done so, we will have to negotiate separate fallback language in respect of this which we will base on industry standard documentation. ISDA has published Supplements 82 and 88 to the 2006 ISDA Definitions to introduce fallbacks to the GBP, USD and JPY swap rates. ISDA has also published a 'Template Form of Amendment' for adoption of GBP LIBOR ICE Swap Rate, USD LIBOR ICE Swap Rate and JPY LIBOR Tokyo Swap Rate fallback provisions which parties can use to bilaterally amend existing confirmations to incorporate the fallbacks set out in Supplements 82 and 88. Transactions which reference the GBP LIBOR ICE Swap Rate entered into on or after August 6, 2021 will incorporate the fallbacks set out in Supplement 82. Transactions which reference the USD LIBOR ICE Swap Rate or the JPY LIBOR Tokyo Swap Rate entered into on or after November 10, 2021 will incorporate the fallbacks set out in Supplement 88.

ISDA has published the 2021 ISDA Interest Rate Derivatives Definitions. These are expected to be the new terms for interest rate derivative transactions and have started to be adopted on October 4, 2021. In addition to adopting the fallbacks set out in the IBOR Fallbacks Supplement for specified IBORs, the 2021 ISDA Interest Rate Derivatives Definitions will also set out a generic framework that will allow parties to work towards identifying a fallback rate and any adjustment for floating rate options that do not have any specific fallbacks for index cessation events.

It is important to understand that the RFRs, even with the adjustment and addition of a spread, are not direct replacements for, and may not operate in the same way as, their corresponding IBORs. Even with spreads or other adjustments, RFRs used as fallbacks may be only an estimate or approximation of the relevant IBOR and may not be subject to continued verification against the relevant IBOR if it is suspended, discontinued, unavailable or non-representative. In addition, the spread adjustment will become permanent in response to an announcement of the permanent discontinuation or non-representativeness of the relevant IBOR, in which case such spread adjustment may reflect a historical correlation or relationship between the relevant rates without taking into account future changes in the unsecured short-term funding costs of banks in the interbank market and without otherwise including a measure that reflects bank credit risk. The spread adjustments for the respective LIBOR rates were fixed under the terms of the IBOR Fallbacks Supplement/IBOR Fallbacks Protocol on the date of the March FCA Announcement i.e. March 5, 2021. Therefore, falling back to a rate based on the RFR may also cause the value of the derivative transaction to change. The extent of any such value change may not be known until the relevant spread is calculated, which may limit the parties' ability to prepare for the related economic effect.

Generally, there are risks associated with using a derivative transaction to hedge underlying exposure under a different product, such as a loan or a bond, which typically contain, in the case of a loan, a specific waterfall of fallback methods with a final fallback referencing the lender's cost of funding, the alternative base rate and/or PRIME, and in the case of a bond, a fallback to the rate for the previous interest period (which effectively converts the product into a fixed rate note). The time at which and the way in which the fallback operates under the derivative transaction may cause the derivative transaction to hedge any underlying exposure less effectively. Examples of differences in operation include differences in fallback rate (such as a difference in the way in which the RFR is adjusted or the spread is calculated), differences in interest accrual periods or payment dates resulting from varying accrual or payment conventions and a difference in triggers (such as the inclusion of a pre-cessation or non-representativeness trigger in one instrument but not the other). Any mismatches may also impact the accounting treatment (such as hedge accounting) and tax treatment. Parties to derivative transactions need to familiarize themselves with how the IBORs are defined within their documentation and how the related fallbacks apply and interact with related arrangements such as a cash product for which the derivative transaction is intended to serve as a hedge and take professional advice as to the potential impact and risks associated with the discontinuation of these IBORs. This should include assessing the effect of the triggers and fallbacks set out in the IBOR Fallbacks Supplement and the IBOR Fallbacks Protocol.

The way in which the updated fallbacks published by ISDA operate may cause challenges for some transaction types, such as 'non-linear' transactions (for example, swaptions; in-arrears swaps; interest rate caps and floors; and range accrual products) and multi-currency transactions where the way in which and the time at which the RFR for each currency is developed or applied may differ.

If the ISDA published provisions are not appropriate for a particular transaction, whether for a new or existing derivative transaction, parties will need to bilaterally negotiate and agree adjustments to the basis on which they adopt those provisions to reflect the needs of the particular transaction.

If a derivative transaction is cleared or traded on an exchange, parties need to familiarize themselves with the approach the relevant clearing house or exchange is planning to take both with respect to the introduction of a new rate in case of a permanent or indefinite discontinuance of the relevant IBOR as well as with respect to the way in which the transaction will be valued. Alongside familiarizing themselves with the output from industry efforts, parties to derivative transactions may need to also put in place processes to actively monitor and manage their derivatives exposure to benchmarks such as LIBOR. In each case they should take appropriate advice.

For derivative transactions that are documented under non-ISDA documentation, you should understand the potential legal, regulatory and financial impact on those transactions of possible changes in, disruption to, or discontinuance of, the interest rates referenced in those transactions. The scope of ISDA's work on IBOR fallbacks may not extend to all such derivative transactions and parties may be required to enter into bilateral negotiations and/or amendments to moderate the impact of changes in, disruption to, or discontinuance of, interest rates referenced in those transactions. RBC will continue to explore possible approaches to these transactions as market standards continue to develop.

You may also have entered into related credit support documentation, such as a credit support annex. These documents may also reference an interest rate and consideration must therefore be given to the consequences of any reform to or discontinuation of that interest rate.

The transition away from the existing overnight rate to the new overnight rate may also have an impact on the products and services RBC provides. For example, if a credit support annex references EONIA as the interest rate payable on euro denominated cash collateral, this may need to be amended to include fallbacks which apply upon the discontinuation of EONIA or to replace references to EONIA with references to €STR. This, in turn, may affect the rate at which derivative portfolios are discounted for valuation purposes, which may mean that the portfolio value may change. Similarly, if a credit support annex references the Federal Funds Rate as the interest rate payable on USD denominated cash collateral, parties may wish to update this to refer to SOFR. Rates such as EONIA and SOFR are not covered by the IBOR Fallbacks Supplement or the IBOR Fallbacks Protocol. ISDA has published the ISDA 2021 EONIA Collateral Agreements Fallbacks Protocol ("**EONIA Protocol**") which enables market participants to amend the terms of certain ISDA credit support documentation to incorporate a fallback to €STR plus 8.5 basis points upon the cessation of EONIA Please note that the following six RBC entities have adhered to the EONIA Protocol: Royal Bank of Canada, Royal Bank of Canada (Channel Islands) Limited, RBC CMA LLC, RBC Europe Limited, RBC Investor Services Bank S.A. and RBC Investor Services Trust. If you adhere to, or have adhered to, the EONIA Protocol, any in-scope legacy ISDA published collateral agreements you have entered into with any of these RBC entities will be amended by the terms of the EONIA Fallbacks Protocol.

ISDA has also published Supplement 90 to the 2006 ISDA Definitions and a new version of the 2021 ISDA Interest Rate Derivative Definitions to enable parties to include fallbacks into new derivatives transactions referencing certain IBORs not covered by the IBOR Fallbacks Supplement and IBOR Fallbacks Protocol. The ISDA 2021 Fallbacks Protocol and the December 2021 Benchmark Module of the ISDA 2021 Fallbacks Protocol were also published to allow firms to incorporate the fallbacks into all legacy derivatives contracts incorporating the 2006 ISDA Definitions or the 2021 ISDA Interest Rate Derivative Definitions with counterparties that also adhere to the protocol.

ANNEX 1 — LOANS

What might be the impact on loans and what is happening to loan documentation?

Syndicated loan documents and, to a lesser extent, bilateral loan documents typically, but not always, include provisions intended to address the short-term unavailability of interest rate benchmarks. Historically, these provisions usually have not identified, or permitted the selection of, an alternative benchmark should the original benchmark cease to be published on a permanent basis. Instead, if the relevant benchmark is not available for the required currency and interest period, a fallback mechanism to determine an alternative rate will typically apply, leading to the interest rate referencing the lender's cost of funding or PRIME. The application of a fallback rate, in these circumstances, may represent a material change to the amount of interest payable.

Consequently, if, in respect of a loan agreement with RBC as a lender ("**RBC Loan**"), the applicable benchmark has ceased to be published on a permanent basis (such as, for example, the 26 LIBOR settings referred to on page 2 and one or more of the parties wish to use an alternative benchmark, to do so will typically require an amendment to the loan agreement and there is no guarantee that it will be possible to reach an agreement on the amendment in all cases. In these circumstances, it is likely that any provisions to address the short-term unavailability of the interest rate benchmark would apply, subject to the provisions of the Critical Benchmarks Act for English law governed loan agreements that reference one of the Six LIBOR Settings and any other applicable legislation addressing contractual continuity.

In anticipation of the expected discontinuation of certain benchmark(s), there have been several developments in recent years which have aimed to make the transition process easier for the loan markets.

The Loan Market Association ("**LMA**") initially published "replacement of screen rate" wording for future amendments to be implemented in syndicated loans in a way which requires the majority lenders rather than all lenders to agree. Then, in line with the recommendation of the Working Group on Sterling Risk-Free Rates that all new and re-financed LIBOR-referencing loan products from the end of Q3 2020 should include clear contractual arrangements through pre-agreed conversion terms or an agreed process for renegotiation to facilitate conversion to a new rate ahead of the end-2021, this wording was updated to include provision for good faith negotiations to agree a replacement by a specified date (with any pre-agreed terms to be included). The LMA then published a template of its multicurrency rate switch facility agreement which provides for a facility agreement with LIBOR-based interest to switch into interest based on SONIA, SOFR, SARON and/or €STR upon the occurrence of a "Rate Switch Date" for the relevant currency (and taking effect from the next interest period for existing loans). The rate switch date can be triggered by a "Rate Switch Trigger Event" – a concept which includes the permanent cessation of a benchmark. The March FCA Announcement discussed on page 3 constituted a "Rate Switch Trigger Event" and a "Rate Switch Date" will have occurred in respect of each relevant LIBOR currency on January 1, 2022, except to the extent an earlier date had been specified. This remained the case, notwithstanding that certain U.S. Dollar LIBOR tenors did not cease to be published on that date and that certain Sterling and Yen LIBOR tenors have continued to be published on a 'synthetic' basis after that date. For further information on Synthetic LIBOR, please refer to page 3.

The US Alternative Reference Rates Committee ("**ARRC**") initially published in April 2019 two versions of its recommended contractual LIBOR fallback language for US syndicated and bilateral loans referencing USD LIBOR. One version prescribed from the outset an independent waterfall of fallbacks to apply in the event that USD LIBOR ceases to be provided (or is announced to be non-representative) (called the "hardwired approach"). The ARRC published updated hardwired fallback language in June 2020 and again in March 2021. The other version introduced an amendment mechanism for negotiating an alternative benchmark and which defers all decisions about the successor rate and adjustment until the relevant trigger event occurs (called the "amendment approach"). Among other things, the amendment approach fallback language provides for future amendments that implement the successor rate to be effected subject to a negative consent right of majority lenders rather than the affirmative consent of all lenders as would typically be required for modifications to applicable interest rates.

The ARRC established recommended milestones in May 2020 (updated in September 2020) for the transition away from USD LIBOR and one such milestone was for syndicated business loans to adopt hardwired fallback language by no later than the end of September 2020 and bilateral business loans by no later than the end of October 2020. Also, in a joint statement published in November 2020, the Federal Reserve Board, the Federal Deposit Insurance Corporation and the Office of the Comptroller of the Currency noted that new USD LIBOR contracts should include "robust fallback language" with a clearly defined alternative reference rate after USD LIBOR's discontinuation.[22]

In relation to a facilities agreement that references USD LIBOR, and which incorporates the ARRC hard-wired fallback language, the March FCA Announcement will have constituted a "Benchmark Transition Event". The Benchmark Replacement Date will be the date on which the benchmark administrator ceases to provide all tenors of U.S. Dollar LIBOR that may be selected as interest periods under the facilities agreement or, if earlier, the date of announcement by the FCA that all such tenors are no longer representative.

The CARR has confirmed on May 16, 2022 that market participants would be allowed to transact in new CDOR based loans which include robust CDOR fallbacks, after June 30, 2023 until the cessation of CDOR. CARR also indicated that it intends to finalize recommended fallback language for CDOR based loans maturing after CDOR's end date, in Q3 2022.[23]

If, following the permanent cessation of a benchmark, the terms of a RBC Loan lead to the selection of an alternative benchmark, you should be aware that, even with the application of any "spread adjustment", it is possible that the alternative benchmark may result in a change to the amounts payable under the terms of the RBC Loan as well as changes to its value.

If the alternative benchmark is a RFR, it may be that, unless a term RFR is developed and used for the relevant currency, the interest rate is only determined at (or near) the end of an interest period based on the simple average of overnight rates or a series of compounded overnight rates, rather than at the start of an interest period as is currently the case. The markets are also exploring how best to calculate a spread adjustment that could be added to the relevant RFR, one such example being the historical median over a 5-year period of the difference between the applicable RFR and LIBOR for a comparable tenor (as published by Bloomberg on March 5, 2021). As RFRs in different currencies are being developed at different times, it may be that the consequences are different for different currencies. More generally, the loan markets continue to evolve in this area and language in RBC Loans dealing with the risk of benchmark discontinuance may be different to that of other products and may not always be consistent with the approach taken by other banks, although RBC is aiming for consistency with market practice in this respect.

The secondary market value of loans referencing an IBOR may therefore be affected. Additionally, mismatches may arise if a derivative transaction is used to hedge a loan and does not deal with the discontinuation of the IBOR or the calculation of RFRs in the same way. This may also impact the application of the hedge accounting rules to your financial arrangements.

From April 2021, RBC's policy has been not to issue new sterling LIBOR referencing loans that expire in 2022 or beyond in accordance with the recommendations of the Working Group on Sterling Risk-Free Rates.[24] The LMA has developed template documentation for new RFR based lending which has been widely adopted in the market since April 2021, particularly for sterling, and there has been a material reduction in the use of rate switch documentation as a result.

From January 2022, RBC's policy has been not to enter into any new USD LIBOR referencing loans unless a specified exemption applies in accordance with the guidance released by five federal financial institution regulatory agencies in conjunction with US state bank and state credit union regulators on October 20 2021.[25] The loan markets continue to evolve in this area in coalescing around a preferred SOFR based rate and set of conventions and language in RBC's SOFR based loans may not always be consistent with the approach taken by other banks, although RBC is aiming for consistency with market practice in this respect.

ANNEX 1 — FLOATING RATE NOTES, COMMERCIAL PAPER AND CERTIFICATES OF DEPOSIT

What might be the impact on floating rate notes, commercial paper and certificates of deposit and what is happening to the associated documentation?

The documentation for floating rate notes, commercial paper and certificates of deposit referencing an IBOR generally (although not always) includes fallbacks which apply if that IBOR is unavailable but, as with loans and derivatives, those fallback provisions were historically drafted in the context of a temporary disruption and were not intended as a solution to a permanent discontinuation of an IBOR. For example, some floating rate notes provide that, in this scenario, the rate for the previous interest period applies which would effectively convert the floating rate note into a fixed rate note. Other floating rate notes, such as structured notes, provide that the rate will be determined on the same basis as the rate under a derivative incorporating the 2006 ISDA Definitions. As discussed in section 1 above, pursuant to those definitions, if the relevant interest rate were to be unavailable, the rate would be determined by reference to quotations from other banks. If the relevant interest rate were permanently discontinued, it is unlikely that quotations would be provided for some or all of the remaining term of the floating rate notes. In this scenario and subject to the provisions of the Critical Benchmarks Act for English law governed instruments that reference one of the Six LIBOR Settings, it may be unclear how payments under and/or the value of the floating rate notes should be calculated. In some other circumstances, the interest rate may be required to be determined based on a screen rate. If such screen rate is unavailable and there are no quotations from other banks, the screen rate for the preceding interest period applies which would effectively convert the floating rate note into a fixed rate note.

Where additional fallbacks contemplating a permanent discontinuation of an IBOR have not been incorporated, there is typically no mechanism in the documentation to specify, after the issue date, an alternative interest rate and therefore the terms of each such floating rate note, commercial paper or certificate of deposit would require amendment, which in the case of floating rate notes is usually by obtaining consent from a specified percentage of holders. Due to the short-term nature of commercial paper and certificates of deposit, their terms do not typically include an amendment mechanism.

Amendments to include a different basis of calculating interest may be difficult where the floating rate notes are broadly held (and there are difficulties in reaching a quorum or approval threshold) or narrowly held (and investors with material stakes are not receptive to any amendments) and/or have high consent thresholds once a quorum is achieved.

Floating rate notes may also not reference an IBOR directly but may reference another index or benchmark which itself uses IBOR for its determination. The implications for such other index or benchmark of the reform or discontinuation of the relevant IBOR will depend on the rules of the index or benchmark and actions taken by the index sponsor or the benchmark administrator in connection with the reform or discontinuation of the relevant IBOR. Such index or benchmark may itself be discontinued or may be materially modified. The documentation for floating rate notes referencing an index or a benchmark generally (although not always) includes fallbacks which apply if that index or benchmark is discontinued or is materially amended. These fallbacks may, like the fallbacks for IBOR, be drafted in the context of a temporary disruption and may not operate to provide a solution to a permanent discontinuation of the index or benchmark. In such case the same issues as the ones discussed above in relation to the permanent discontinuation of IBOR will arise.

Floating rate notes issued more recently by RBC contain certain fallback arrangements with the purpose of providing a solution to the permanent discontinuation of an IBOR which will apply on the occurrence of certain trigger events. Depending upon the instrument and nature of the trigger event, the fallback provisions include the use of a replacement benchmark rate or index including a spread adjustment determined by the calculation agent and conforming changes to the terms of the floating rate notes or, in other cases, the ability of the issuer to redeem the floating rate notes early or instruct the calculation agent to adjust the terms of the floating rate notes, which may include selecting one or more successor benchmarks or indices and making related adjustments.

The operation of any existing fallback arrangements, including the additional fallbacks contemplating a permanent discontinuation of an IBOR, could result in a different return for the holder of the relevant product (which may include payment of a lower rate of interest or a fixed rate of interest until maturity) than they might receive under similar products which contain different or no fallback arrangements (including which they may otherwise receive in the event that legislative measures or other initiatives (if any) are introduced to transition from the relevant IBOR to an alternative rate). However, this risk is more acute for existing holders of floating rate notes than existing holders of commercial paper or certificates of deposit, as the latter products are generally non-interest bearing, and accordingly only rarely reference an IBOR, and are of a short-term nature and therefore less likely to be disrupted by the IBOR reforms in the manner described in this paragraph.

This area is constantly developing and language may therefore vary between products, different issuers and different markets. There may even be instances where issuances under the same program (but with a different issue date) contain different provisions in respect of an IBOR (or another index dependent on IBOR) discontinuation as the market approach to this issue evolves. For example, as described above, additional fallback language has been developed with the aim of providing a solution to the permanent discontinuation of an IBOR and specifically, ARRC published its recommended contractual LIBOR fallback language for floating rate notes referencing USD LIBOR in May 2019, which RBC has since used (with modifications) for floating rate notes issued in certain jurisdictions including the US.

The market continues to develop in relation to RFRs as reference rates for floating rate notes and their adoption as alternatives to the relevant IBORs. In addition, market conventions for calculating the interest rate for floating rate notes referencing RFRs continue to develop; as such, a variety of conventions are being used in the market.

While in most cases the March FCA Announcement discussed on page 3 is unlikely to result in the operation of fallbacks in floating rate notes referencing LIBOR, the precise terms of the triggers and fallbacks included in the relevant bond documentation would need to be considered in light of the March FCA Announcement. For floating rate notes referencing USD LIBOR which contain ARRC-recommended fallback language, the ARRC has expressed the view that the March FCA Announcement would constitute a "Benchmark Transition Event" for all USD LIBOR settings. However, the occurrence of such "Benchmark Transition Event" does not require an immediate transition under the ARRC-recommended fallback language, as actual transition will be on the date that such benchmark permanently ceases to be provided.

Certain CDOR referencing floating rate notes recently issued by RBC include CARR's recommended fallback language. The Ontario Securities Commission has noted that the publication of RBSL's cessation notice will constitute an "index cessation event" under CARR's recommended fallback language for floating rate notes.

The continued publication of the Six LIBOR Settings on a non-representative basis after the end of 2021 means that fallback provisions triggered on cessation or unavailability only will not, in most cases, operate from the end of 2021. The Critical Benchmarks Act will further support contractual continuity and the application of Synthetic LIBOR to contracts governed by English law. Instruments that will move away from one of the Six LIBOR Settings prior to its permanent cessation based on a trigger such as non-representativeness are expected to operate from the end of 2021 in accordance with their terms. However, as noted above, the precise terms of the triggers and fallbacks included in the relevant bond documentation would need to be considered.

The impact of the laws discussed on page 3 on floating rate notes which have no realistic ability of transitioning to a replacement benchmark before the permanent cessation of such benchmark (so-called 'tough legacy' contracts) will depend on whether they are within scope of the various legislative solutions.

The secondary market value of floating rate notes, commercial paper and certificates of deposit referencing an IBOR or another index or benchmark dependent on an IBOR may therefore be affected. Additionally, mismatches may arise if a derivative transaction is used to hedge such a product and does not deal with the discontinuation of the IBOR, the discontinuation or material modification of the other index or benchmark in the same way. This may also impact the application of the hedge accounting rules to your financial arrangements.

Where RBC is not the issuer of the floating rate note, commercial paper or certificate of deposit but is offering a secondary market product, RBC does not set the terms of those products and you should be aware that such products may (i) not include any fallbacks, (ii) include fallbacks that differ from those included in a product issued by RBC and/or (iii) be subject to a change of the benchmark and/or repricing as a result of the discontinuation of the relevant IBOR.

ANNEX 1 — COLLATERALIZED LOAN OBLIGATIONS

What might be the impact on collateralized loan obligations and what is happening to the associated documentation?

The documentation for notes issued by collateralized loan obligation vehicles ("**CLO Notes**") which reference an IBOR generally (although not always) includes fallbacks which apply if that IBOR is unavailable. Many CLO Notes also rely on the presence of a swap, which may also reference an IBOR, in order to hedge interest rate or currency risk. As discussed above, fallback provisions for notes and swaps were historically drafted in the context of a temporary disruption and were not intended as a solution to a permanent discontinuation of an IBOR. Similarly, a change to the interest rate or other feature of the loans or bonds in the portfolio underlying the CLO Notes may have an impact on the way in which the CLO Notes perform.

The continued publication of the Six LIBOR Settings on a non-representative basis after the end of 2021 means that fallback provisions triggered on cessation or unavailability only will not, in most cases, operate from the end of 2021. The Critical Benchmarks Act will further support contractual continuity and the application of Synthetic LIBOR to contracts governed by English law. Instruments that will move away from one of the Six LIBOR Settings prior to its permanent cessation based on a trigger such as non-representativeness are expected to operate from the end of 2021 in accordance with their terms. However, the precise terms of the triggers and fallbacks included in the relevant documentation for the CLO Notes would need to be considered.

The operation of any existing fallback arrangements could result in a different return for the holders of floating rate CLO Notes (which may include payment of a lower rate of interest or a fixed rate of interest until maturity) than they might receive under similar products which contain different or no fallback arrangements (including which they may otherwise receive in the event that legislative measures or other initiatives (if any) are introduced to transition from the relevant IBOR to an alternative rate).

If a relevant IBOR does not survive in its current form or at all, this could also adversely affect the value of, and amounts payable under, any loans or bonds in the portfolio underlying the CLO Notes, which pay interest calculated with reference to such IBOR. This could reduce amounts which may be available to the issuer to pay out to holders of CLO Notes. There may also be a mismatch between any replacement rate of interest applicable to the affected underlying loan or bond and the replacement rate of interest the issuer must pay under any applicable hedging arrangements. This could lead to the issuer receiving amounts from affected loans or bonds which are insufficient to make payments due under the relevant hedging arrangements, and their potential termination.

There was, historically, no mechanism in the documentation to specify, after the issue date, an alternative interest rate for the floating rate CLO Notes, or to amend references to IBORs in the other transaction documents. Therefore, the consent of a specified percentage of noteholders would be required to address any discontinuation of the relevant IBOR by replacing such IBOR on a permanent basis. If such consent could not be obtained, the floating rate CLO Notes would continue to rely on existing fallback arrangements, which (as noted above) are not intended for long-term use and may impact the performance of such CLO Notes. More recently the terms and conditions of CLO Notes may provide for an amendment to be made to the provisions of the transaction documents, without the consent of noteholders, to change the reference rate in respect of floating rate notes and to make such other necessary amendments due to a material disruption, a change in the methodology of calculation, or the cessation, in each case of an IBOR or other applicable or related index or benchmark. This is especially relevant now given the March FCA Announcement discussed in page 3, and it may be desirable to amend the applicable interest rate provisions in the affected CLO Notes, including any hedging arrangements.

ANNEX 1 – ASSET-BACKED SECURITIES AND SECURITIZATIONS (OTHER THAN SYNTHETIC SECURITIZATIONS)

What might be the impact on asset-backed securities and securitizations and what is happening to the associated documentation?

The documentation for floating rate asset-backed notes and securitizations (which, for the purposes of this section, shall exclude synthetic securitizations which are considered in section 6 below) (such floating rate asset-backed notes and securitizations together the "ABS Notes") which reference an IBOR generally (although not always) includes fallbacks which apply if that IBOR is unavailable. Many ABS Notes rely on the presence of a swap, which may also reference an IBOR, in order to hedge interest rate or currency risk. As discussed above, fallback provisions for notes and swaps were historically drafted in the context of a temporary disruption and were not intended as a solution to a permanent discontinuation of an IBOR. Similarly, a change to the interest rate or other features of the assets backing the ABS Notes may have an impact on the way in which the ABS Notes perform.

There was, historically, no mechanism in the documentation to specify, after the issue date, an alternative interest rate for the ABS Notes, or to amend references to IBORs in the other transaction documents. Therefore, the consent of a specified percentage of holders would be required to address any discontinuation of the relevant IBOR by replacing such IBOR on a permanent basis.

However, amendments to include a different basis of calculating interest on the ABS Notes or to amend other transaction documents may be difficult where the ABS notes are broadly held (and there are difficulties in reaching a quorum or approval threshold) or narrowly held (and investors with material stakes are not receptive to any amendments) and/or have high consent thresholds once a quorum is achieved.

The operation of any existing fallback arrangements could result in a different return for the holders of ABS Notes (which may include payment of a lower rate of interest or a fixed rate of interest until maturity) than they might receive under similar products which contain different or no fallback arrangements (including which they may otherwise receive in the event that legislative measures or other initiatives (if any) are introduced to transition from the relevant IBOR to an alternative rate).

This area has developed over time and language may therefore vary between products, different issuers and different markets. There may also be instances where issuances under the same program (but with a different issue date) contain different provisions in respect of an IBOR discontinuation as the market approach to this issue evolved.

For example, ARRC published its recommended contractual LIBOR fallback language for securitizations referencing USD LIBOR in May 2019, which RBC has used in respect of some issues of ABS Notes. In addition, many UK ABS Notes issued during the last three years have included a provision allowing the issuer to propose amendments to its transaction documents if an IBOR is discontinued using a "negative consent" procedure. The relevant amendments may include replacing the IBOR in the ABS Notes and in any hedging transactions, adjusting any relevant margin and allowing other references to the relevant IBOR in the underlying transaction documents to be replaced. The issuer's proposals will be carried into effect unless a specified percentage of ABS noteholders object. Originators and sponsors of GBP denominated ABS Notes have become increasingly active in using this negative consent procedure or a full consent solicitation to change LIBOR-linked ABS Notes to a compounded daily SONIA benchmark.

For ABS Notes referencing USD LIBOR which contain ARRC-recommended fallback language, the ARRC has expressed the view that the March FCA Announcement would constitute a "Benchmark Transition Event" for all USD LIBOR settings. However, the occurrence of such "Benchmark Transition Event" does not require an immediate transition under the ARRC-recommended fallback language, as actual transition will be on the date that such benchmark permanently ceases to be provided.

The impact of the laws discussed on page 3 on ABS Notes which have no realistic ability of transitioning to a replacement benchmark before the permanent cessation of such benchmark (so-called 'tough legacy' contracts) will depend on whether they are within scope of the various legislative solutions. GBP denominated floating rate ABS Notes typically have 3 month interest periods. ABS Notes are in scope of the Critical Benchmarks Act, so in English law ABS notes that have not transitioned away from GBP LIBOR, the effect of the Critical Benchmarks Act is that references to 3 month LIBOR will be read as references to 3 month Synthetic LIBOR.

The secondary market value and credit rating of ABS Notes referencing an IBOR may be affected. This is likely to be exacerbated if any derivatives entered into by the issuer as part of a securitization do not address the discontinuation of the IBOR in the same way as the ABS Notes, as this may lead to a mismatch in cash-flows available to the issuer to meet payment on the ABS Notes. In turn, this may affect the rating and/or secondary market value of the ABS Notes.

Where RBC is offering a secondary market product, RBC does not set the terms of those products and you should be aware that such products may (i) not include any fallbacks, (ii) include fallbacks that differ from those included in a product issued by RBC and/or (iii) be subject to a change of the benchmark and/or repricing as a result of the discontinuation of the relevant IBOR.

ANNEX 1 — SYNTHETIC COLLATERALIZED LOAN OBLIGATIONS

What might be the impact on synthetic collateralized loan obligations and what is happening to the associated documentation?

The documentation for synthetic collateralized loan obligations ("**Synthetic CLOs**") (also called synthetic securitizations or risk transfer/sharing transactions) does not generally address the reform or discontinuation of IBORs referenced by the obligations in the underlying portfolio. This is because the fee payable by the originator to the protection provider is usually calculated independently of the interest cash flows received on the underlying portfolio. Furthermore, the protection fee is often based on a fixed rate and therefore will not be affected by the IBOR reforms.

However, if the Synthetic CLO is funded by the originator issuing credit linked notes, a floating rate will typically be payable on the funding element (i.e. as the interest under the notes). If the originator issues floating rate credit linked notes referencing an IBOR as part of the funded structure, the issues described in section 3 above in respect of floating rate notes will similarly apply in the context of such Synthetic CLO.

Alternatively, if the credit protection is provided by a special purpose vehicle ("SPV") which funds its obligations to the originator through the issuance of floating rate credit linked notes, the floating rate element of the interest payable to noteholders will typically be a pass-through of the interest received on any deposit, repo, swap or securities ("Investment") in which the SPV invests the note proceeds.

In a funded SPV structure, if the floating rate of interest payable on the Investment references an IBOR, the implications of the reform or discontinuation of that IBOR will depend on where the relevant rate is documented. If it is documented in the terms and conditions of the notes, the issues described in section 3 above in respect of floating rate notes will similarly apply in the context of the Synthetic CLO. However, if the terms and conditions of the notes simply refer to the interest amount received on the relevant Investment, the implications for noteholders of the reform or discontinuation of the relevant IBOR will depend on the terms governing that underlying Investment (in which case, please refer to the relevant section above for a description of the risks associated with the relevant product type).

ANNEX 2

You can find further information on the websites linked below.

Organization	Links
Alternative Reference Rates Committee (ARRC)	https://www.newyorkfed.org/arrc/sofr-transition
Bank of England (BOE)	https://www.bankofengland.co.uk/markets/transition-to-sterling-risk-free-rates-from-libor https://www.bankofengland.co.uk/markets/sonia-benchmark
Bank of Japan (BOJ)	https://www.boj.or.jp/en/paym/market/jpy_cmte/index.htm/
Canadian Alternative Reference Rate Working Group (CARR)	https://www.bankofcanada.ca/markets/canadian-alternative-reference-rate-working-group/
European Central Bank (ECB)	https://www.ecb.europa.eu/paym/initiatives/interest_rate_benchmarks/WG_euro_risk-free_rates/html/index.en.html
European Money Markets Institute (EMMI)	https://www.emmi-benchmarks.eu/euribor-org/euribor-reform.html https://www.emmi-benchmarks.eu/euribor-eonia-org/about-eonia.html
Financial Conduct Authority (FCA)	https://www.fca.org.uk/markets/libor
Financial Stability Board – Official Sector Steering Group (OSSG)	https://www.fsb.org/work-of-the-fsb/policy-development/additional-policy-areas/financial-benchmarks/
ICE Benchmark Administration (IBA)	https://www.theice.com/iba
International Capital Market Association (ICMA)	https://www.icmagroup.org/Regulatory-Policy-and-Market-Practice/benchmark-reform/
International Swaps and Derivatives Association, Inc. (ISDA)	https://www.isda.org/category/legal/benchmarks/
Reserve Bank of Australia (RBA)	https://www.rba.gov.au/mkt-operations/resources/interest-rate-benchmark-reform.html
Swiss National Bank (SNB)	https://www.snb.ch/en/ifor/finmkt/fnmkt_benchm/id/finmkt_reformrates

1. “RBC” is used in this letter to mean Royal Bank of Canada and its principal subsidiaries, including RBC Capital Markets, LLC, RBC Dominion Securities Inc. and RBC Europe Limited.
2. https://www.fca.org.uk/publication/documents/future-cessation-loss-representativeness-libor-benchmarks.pdf
3. https://www.theice.com/publicdocs/ICE_LIBOR_Consultation_on_Potential_Cessation.pdf
4. https://www.emmi-benchmarks.eu/assets/files/D0246A-2019-EURIBOR%20Benchmark%20Statement_final%20-%20FINAL.pdf
5. https://www.emmi-benchmarks.eu/euribor-eonia-org/about-eonia.html
6. https://www2.asx.com.au/connectivity-and-data/information-services/benchmarks
7. https://www.refinitiv.com/content/dam/marketing/en_us/documents/policies/cdor-change-consultation.pdf
8. Refinitiv Benchmark Services (UK) Limited - Canadian Dollar Offered Rate (CDOR) cessation notice
9. https://www.bankofcanada.ca/wp-content/uploads/2019/07/results-carr-consultation.pdf
10. https://www.bankofcanada.ca/2021/11/carr-publishes-corra-related-recommendations-and-key-findings-in-its-review-of-cdor/
11. Consultation on a potential new term interest rate to replace CDOR in certain financial instruments (bankofcanada.ca)
12. Article 23d Benchmarks Regulation – Draft Notice of Requirements (fca.org.uk)
13. https://www.fca.org.uk/publication/libor-notices/article-23c-benchmarks-regulation-draft-permitted-legacy-notice.pdf
14. https://www.fca.org.uk/publication/libor-notices/article-21a-benchmarks-regulation-prohibition-notice.pdf
15. https://www.federalreserve.gov/newsevents/pressreleases/files/bcreg20201130a1.pdf
16. https://www.federalreserve.gov/supervisionreg/srletters/SR2117a1.pdf
17. https://www.osfi-bsif.gc.ca/Eng/fi-if/in-ai/Pages/libor.aspx?utm_campaign=libor&utm_medium=email&utm_source=osfi-bsif&utm_content=letter
18. ARRC-Statement-LIBOR-tenors-Legislation.pdf (newyorkfed.org).
19. OSFI’s expectations for CDOR Transition (osfi-bsif.gc.ca).
20. Note that there are some exceptions to this. For example, the fallback for “AUD-BBR-BBSW” in the 2006 ISDA Definitions (which is a floating rate option for the Australian dollar IBOR, which is called the Bank Bill Swap Rate or “BBSW”) is to a rate determined by the calculation agent having regard to comparable indices then available.
21. https://www.isda.org/2021/03/05/isda-statement-on-uk-fca-libor-announcement
22. https://www.federalreserve.gov/newsevents/pressreleases/files/bcreg20201130a1.pdf
23. CDOR transition roadmap and milestones (bankofcanada.ca)
24. https://www.bankofengland.co.uk/-/media/boe/files/markets/benchmarks/rfr/rfr-working-group-roadmap.pdf
25. SR 21-17 attachment: Joint Statement on Managing the LIBOR Transition (federalreserve.gov)

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