

Refinitiv Benchmark Services (UK) Limited

Canadian Dollar Offered Rate (CDOR)

Methodology

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Section 1

Introduction

1.1 Overview

This document specifies the Methodology of the Canadian Dollar Offered Rate benchmark (“CDOR” or the “Benchmark”).

The purpose of CDOR is to provide a daily benchmark reference rate for Bankers’ Acceptance borrowings (“BAs”). CDOR allows an average rate to be determined for the market without the need of each borrower to contact individual institutions. CDOR is the recognized benchmark reference rate for BAs.

1.2 Benchmark Administrator

Refinitiv Benchmark Services (UK) Limited (“RBSL”) is the CDOR Benchmark Administrator that holds the primary responsibility for all aspects of the CDOR determination process.

RBSL is incorporated in England and Wales with company number 08541574 and is a wholly owned indirect subsidiary of London Stock Exchange Group plc (“LSEG”).

RBSL is authorised and regulated in the UK by the Financial Conduct Authority (“FCA”), FCA Reference Number 610678; RBSL is listed on the FCA Register as an authorized Benchmark Administrator pursuant to Article 34 of the UK BMR¹.

In respect of CDOR, RBSL is required to comply with Multilateral Instrument 25-102 Designated Benchmarks and Benchmark Administrators, a rule adopted and regulated by members of the Canadian Securities Administrators (“CSA”).

As Administrator, RBSL is responsible for collecting input data, determining and publishing the Benchmark, and for all aspects of governance, oversight, compliance and integrity of the Benchmark.

1.3 Description of the Benchmark

CDOR is a committed bank lending rate or “executable rate” at which each CDOR Contributor is obligated to lend funds to corporate borrowers with existing committed credit facilities referencing CDOR, plus a stamping fee (if applicable).

CDOR comprises three tenors: 1 month, 2 months and 3 months. (Two additional tenors, 6 months and 12 months, ceased to be published after 14 May 2021.) CDOR is calculated using submitted rates (contributions) from a panel of contributor banks that are active in the Canadian Bankers’ Acceptance market.

¹ The Benchmarks (Amendment and Transitional Provision) (EU Exit) Regulations 2019.

CDOR is published Monday to Friday at 10:15am ET, subject to market holidays. The Benchmark is calculated for each tenor as the arithmetic average of the contributions after the highest and lowest contributions have been discarded and is published to 5 decimal places.

This Methodology is dependent on sufficient liquidity in the underlying Bankers' Acceptance market or otherwise in accordance with the hierarchy of data sources permitting contributing banks to make representative contributions.

1.4 Intended Readership

This document is intended for Stakeholders of the Benchmark.

1.5 Document Publication

This document is available on the LSEG website and on request.

Section 2

Input data

2.1 Contributions

CDOR is determined daily from a survey of bid-side rates (“Contributions”) provided by Canadian financial institutions that routinely accept BAs issued by borrowers and are market-makers in BAs either directly or through an affiliate (the “Contributors”).

CDOR is a committed bank lending rate or “executable rate” at which each CDOR Contributor is obligated to lend funds to corporate borrowers with existing committed credit facilities referencing CDOR, plus a stamping fee (if applicable). The Contributions submitted to the Administrator by each Contributor represent this committed bank lending rate without the inclusion of any stamping fee.

Each Contributor is required to document its CDOR submission procedures, in respect of the data sources and expert judgment used to determine its CDOR contributions to the Administrator as noted within the CDOR Contributor Code of Conduct (“CCoC”).

The market for BAs is considered sufficiently active for the purposes of determining the CDOR benchmark if there is trading activity in BAs or related or correlated instruments that allows Contributors to establish a representative market level when making Contributions.

2.2 Contributor Eligibility

The universe of banks eligible for inclusion as Contributors to the Benchmark are banks that are:

- Active in the primary BA issuance market in Canada. Active means accounting for 1% or more of the BA issuance market.
- Willing to accept and implement the CDOR Contributor Code of Conduct, a copy of which is available at https://www.lseg.com/content/dam/ftse-russell/en_us/documents/methodology/cdor-contributor-code-of-conduct.pdf
- Willing to agree to regulation by relevant authorities in Canada, should the Benchmark become regulated.

If anything comes to the attention of the Administrator that leads the Administrator to believe that a Contributor is not adhering to the CDOR Contributor Code of Conduct, the Administrator may not use input from that Contributor until the situation is clarified or rectified to the Administrator’s satisfaction in accordance with the process specified in the CDOR Contributor Code of Conduct.

2.3 Contributor Panel

As of the Effective Date of this Methodology, the Contributors are:

- Bank of Montreal
- The Bank of Nova Scotia
- Canadian Imperial Bank of Commerce

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- National Bank of Canada
 - Royal Bank of Canada
 - The Toronto-Dominion Bank

This panel of Contributors may be updated from time to time. Changes to the panel are available on request from LSEG via <https://my.refinitiv.com/content/mytr/en/helpandsupport.html>. The panel size and membership are sufficient to ensure that the input data used in the determination of CDOR is representative of the BA market.

Participation in the panel of contributors is voluntary. Contributors acknowledge the importance of CDOR as a reference rate for certain Canadian dollar financial products, and that a minimum number of Contributors are needed to contribute to the setting of CDOR. Contributors will provide 90 calendar days written notice prior to terminating its participation in the CDOR panel.

2.4 Hierarchy of Data Sources to be Used by Contributors

Contributions are Contributors' assessment of the appropriate CDOR rate at which they will lend funds (excluding any stamping fee) to corporate clients in the BA primary market under BA facilities that reference CDOR.

The hierarchy of data sources is as follows:

The Contribution submitted for each maturity band by the Contributor shall be anchored in the following Bona Fide Arm's-Length Transactions:

- i. Primary BA market issuances; and
- ii. Secondary BA market transactions,

if any, completed after the publication of CDOR on the prior Business Day but prior to the contribution of the Contribution in respect of such maturity band.

The Contribution submitted shall also reflect the adjustments made by the Contributor, if any, upon the consideration of market data and other Expert Judgment.

If the Contributor did not complete any Bona Fide Arm's-Length primary BA market issuances or secondary BA market transactions after the publication of CDOR on the prior Business Day but prior to the contribution of the Contribution for the applicable maturity band, the primary BA market issuances or secondary BA market transactions on the most recent Business Day will be considered by the Contributor but there will be a greater emphasis on market data and other Expert Judgment.

Expert Judgment or discretion used in the determination of each contribution shall be free from any undue or improper influence and shall not, for greater certainty, take into consideration any factors that would be contrary to the CDOR Methodology and CDOR CCoC including, without limitation, the consideration of swap resets that are linked to CDOR or the knowledge of any Contribution that may be submitted by another Contributor to the Administrator prior to the publication of CDOR.

The Contributor shall determine to what extent, if any, a Contribution should be subject to a review prior to its contribution to the Calculation Agent in addition to the post-contribution review required under the "Oversight" provisions of the CDOR Contributor Code of Conduct.

Section 3

Determination and publication of the Benchmark

3.1 Contribution Procedure

Contributors must submit their rates between 9:40am and 10:10am ET. The last Contribution received from each Contributor before the contribution window is closed will be taken for use in the Benchmark determination.

Contributors can make changes to their Contributions as many times as required up until 10:10am ET. Any new Contribution will overwrite the previous Contribution. Contributions or changes after 10:10am ET will not be included in the Benchmark determination and will be excluded from compilation of the final results.

Contributions must be numeric and to no more than 3 decimal places.

3.2 Benchmark Determination and Minimum Contribution Criteria

If **five or more** Contributions are received, at 10:15am ET the Contributions for each tenor will be ranked, the highest and lowest discarded and remaining rates averaged to calculate the benchmark subject to any delay as set forth in section 3.4. If one or more of the highest Contributions are identical values, one will be selected at random and the other(s) discarded. If one or more of the lowest Contributions are identical values, one will be selected at random and the other(s) discarded. An arithmetic mean to 5 decimal places will be calculated for each tenor using the remaining Contributions.

If **more than one but fewer than five** Contributions are received (i.e. two, three, or four Contributions are received), at 10:15am ET CDOR will be calculated using the average of all received Contributions subject to any delay as set forth in section 3.4. The highest and lowest Contributions will not be excluded from the calculation. An arithmetic mean to 5 decimal places will be calculated for each tenor using the Contributions.

If **only one** Contribution is received by 10:10am ET, the Administrator will extend the Contribution window to 12:00pm ET and will use reasonable efforts to contact all Contributors to encourage additional rates. If no additional Contributions have been submitted by 12:00pm ET, this one rate will stand alone as the CDOR benchmark for the day.

In such an event that **zero** Contributions are received by 12:00pm ET, the Administrator will re-publish the previous day's published rate for all tenors. The historical rate will be used until a date when one or more Contributions are received.

In the event CDOR is calculated using **fewer than five** Contributions, the Administrator will initiate its standard process for alerting market participants, which includes publishing an alert on the FIXALERT page.

Number of Contributors	Summary Calculation Methodology	Notes
5-6	Contributions for each maturity will be ranked, with the highest and lowest discarded. An arithmetic mean to 5 decimal places will be calculated of the remaining Contributions.	In addition to this section 3.2, refer to sections 3.4 (Delayed Release) and 3.6 (Refix Policy) for protocols for unusual circumstances.
2-4	An arithmetic mean to 5 decimal places will be calculated from all received Contributions.	
1	This one rate will stand alone as the CDOR benchmark for the day	
0	Administrator will re-publish the previous day's published rate for all tenors. The historical rate will be used until a date when one or more Contributions are received.	

3.3 Publication Time

The Benchmark will be published at 10:15am ET each Business Day, subject to any delay as set forth in sections 3.2 and 3.4. A Business Day means any day on which Schedule 1 banks under the Bank Act (Canada) are open for business in Toronto, Ontario, Canada.

The received Contributions will be published at 10:15 am ET subject to any delay in the publication of the Benchmark as set forth in sections 3.2 and 3.4.

The Benchmark is published via various LSEG products including Eikon, Workspace and Datascope. It is also published via third party data vendors.

3.4 Delayed Release

In the event *one or more* Contributor(s) does not make its Contribution available to the Administrator before the 10:10am ET closing of the contribution window, the Administrator may, at its discretion, delay publication of the Benchmark up until 11:00am ET at the latest in order to use reasonable efforts to contact the Contributor(s) and permit completion of the Contribution, as well as to enable the completion of the Contribution through alternative means if the standard contribution process is experiencing an operational failure.

If the Administrator has reason to believe that a Contribution may be a potential error it may, at its discretion, delay publication of the Benchmark up until 11:00am ET at the latest in order to permit the Contributor to confirm or amend the potential error.

The Administrator may, at its discretion, delay publication of the Benchmark up until 11:00am ET at the latest, if technical difficulties are impacting the contribution process, or if any such delay is required to allow a Contributor to correct an error made in its Contribution, provided the Administrator is notified at least fifteen minutes prior to publication time.

The Administrator retains the right to amend the rate after publication if, before 11:00am ET, it becomes apparent that an error materially impacts the previously calculated rate. In this event, the rate will be re-fixed with best efforts before 12:00pm ET, consistent with the Refix Policy as noted in Section 3.6.

In extraordinary circumstances, the publication of a benchmark may be delayed until 12:00pm ET. This should only occur following the unusual circumstance when *one or zero* Contributors contribute a rate, in which case the Administrator will delay the fix until 12:00pm ET. Refer to Section 3.2 for further detail.

In the event of a delay in publication of the Benchmark, the Administrator will initiate its standard process for alerting market participants, which includes publishing an alert on the FIXALERT page.

3.5 Exercise of Expert Judgment by the Administrator

The Administrator will not exercise Expert Judgment in the determination of CDOR.

3.6 Refix Policy

An error in a Contribution identified by a Contributor after the publication time of 10:15am ET but before 11:00am ET will only lead to a refix of CDOR if that error has a material effect on the final calculated benchmark. An error in a Contribution identified by a Contributor after 11:00am ET will not lead to a refix.

Any material error in the calculation of the Benchmark, which is identified by the Administrator after the publication time but before 11:00am ET, will result in an intraday refix. The Administrator will publish an alert on the FIXALERT page, and issue a full alert via email, to alert market participants of the refix, and will use reasonable efforts to publish the refixed rate by 12:00pm ET on that day.

A material error is one that results in a net change equal to or greater than + or – 0.01, that is, one basis point, to the original published rate. (For the avoidance of doubt, if a published CDOR is 0.66750, a material error is one that would result in the published rate being amended to either 0.65750 or less, or 0.67750 or more.) A non-material error identified by the Administrator in the calculation of the Benchmark after the publication time will not result in an intraday refix. Any material error that does result in an intraday refix will be reported to the independent CDOR Oversight Committee.

Errors that do not result in an intraday refix will be reported quarterly to the independent CDOR Oversight Committee and published on the Administrator's public website.

Section 4

Benchmark Methodology reviews and change procedures

4.1 Review of the Methodology and Contributors

The Administrator will carry out a review of the Methodology on at least an annual basis. Additional reviews may be conducted at the Administrator's discretion. Such additional reviews may be triggered by (i) events affecting the Benchmark that are not optimally treated by the Methodology, (ii) events in the underlying market, (iii) developments in the source of input data used in the Benchmark determination and (iv) issues raised by Stakeholders in the Benchmark.

Reviews will include an analysis of the underlying market the Benchmark seeks to represent, performance and appropriateness of the current Contributors, and analysis of other potential Contributors. In addition, reviews will confirm that the Benchmark is traceable and verifiable.

The aim of the review will be to ensure that the Benchmark is still representative of the underlying market, that the Contributors are the optimum grouping to provide Contributions to represent the underlying market, and that the current Contributors have been submitting in an accurate and timely manner. The independent CDOR Oversight Committee will provide input into the review and reviews are approved by the appropriate RBSL board committee.

Back-testing shall take place at least at each annual review of the Methodology and following any material change of the Methodology. The Methodology shall include an assessment of the back-testing results, including processes to ensure that systemic anomalies highlighted by back-testing are identified and properly addressed. No anomalies or errors were identified under the back-test for the 12 month period to the date of the last annual review shown on the cover of this Methodology.

4.2 Changes to the Methodology

Changes to the Methodology shall be made in accordance with the RBSL Benchmark Methodology Change and Cessation Policy. The combined RBSL Benchmark Methodology Change and Cessation Policy is available at https://www.lseg.com/content/dam/ftse-russell/en_us/documents/policy-documents/rbsl-benchmark-methodology-change-cessation-policy.pdf.

4.3 Objective of the Methodology

The objective of this Methodology is to reflect best practice across the industry for the calculation and Administration of Benchmarks that seek to represent the behaviour of markets showing similar characteristics as the Canadian BA market. The Methodology shall also comply with all applicable regulations and policies.

4.4 Identification of Potential Limitations of the Benchmark

The ability of Contributors to provide accurate Contributions relies on there being a liquid market in BAs in the Canadian market. If any ongoing constraint or fragmentation to liquidity in this market is identified or foreseen, the Administrator will consult with Stakeholders as well as the independent CDOR Oversight Committee.

Section 5

Governance and further information

5.1 **Benchmark Administrator**

Refinitiv Benchmark Services (UK) Limited (“RBSL”) is the Administrator of CDOR. RBSL is a LSEG company.

As Administrator, RBSL is responsible for collecting input data, determining and publishing the Benchmark, and for all aspects of governance, oversight, compliance and integrity of the Benchmark.

5.2 **Oversight Committee**

The independent CDOR Oversight Committee is responsible for oversight of all aspects of the provision of the Benchmark including the reviews of the Benchmark definition and Methodology at least annually, overseeing any changes to the benchmark Methodology or cessation of the benchmark, and overseeing the Administrator’s control framework, management and operation of the Benchmark.

5.3 **Benchmark Manager**

A benchmark manager is appointed from time to time by the Administrator who will be a subject matter expert responsible for interpreting the Methodology.

5.4 **User Feedback**

RBSL shall communicate periodically with the panel of Contributors in order to assess conditions in the market for Canadian Bankers’ Acceptances and to assess the ongoing fitness and suitability of the Methodology. Such feedback may be used as part of the periodic review of the Methodology.

5.5 **Enquiries Regarding the Methodology**

Please address any enquiries regarding the CDOR Methodology to index_queries@lseg.com.

Section 6

Definition of key terms

Capitalised terms used in this document but not otherwise defined are defined in the following table. Definitions are sourced from IOSCO Principles for Financial Benchmarks².

Glossary of Defined Terms & Acronyms

Term	Definition
Administration	Includes all stages and processes involved in the production and dissemination of a Benchmark, including: <ol style="list-style-type: none">Collecting, analysing and/or processing information or expressions of opinion for the purposes of the determination of a Benchmark;Determining a Benchmark through the application of a formula or another method of calculating the information or expressions of opinions provided for that purpose; andDissemination to users, including any review, adjustment and modification to this process.
Administrator	An organisation or legal person that controls the creation and operation of the Benchmark Administration process, whether or not it owns the intellectual property relating to the Benchmark. In particular, it has responsibility for all stages of the Benchmark Administration process, including: <ol style="list-style-type: none">The calculation of the Benchmark;Determining and applying the Benchmark Methodology; andDisseminating the Benchmark.
Arm's-length Transaction	A transaction between two parties that is concluded on terms that are not influenced by a conflict of interest (e.g., conflicts of interest that arise from a relationship such as a transaction between affiliates).
Benchmark	Prices, estimates, rates, indices or values that are: <ol style="list-style-type: none">Made available to users, whether free of charge or for payment;Calculated periodically, entirely or partially by the application of a formula or another method of calculation to, or an assessment of, the value of one or more underlying Interests;Used for reference for purposes that include one or more of the following:<ul style="list-style-type: none">– determining the interest payable, or other sums due, under loan agreements or under other financial contracts or instruments;– determining the price at which a financial instrument may be bought or sold or traded or redeemed, or the value of a financial instrument; and/or– measuring the performance of a financial instrument. For purposes of this methodology document, any reference to the term "Benchmark" shall be a reference to CDOR.
Bona Fide	Refers to data where the parties submitting the data have executed, or are prepared to execute, transactions generating such data and the concluded transactions were executed at Arm's-length from each other.
Calculation Agent	A legal entity with delegated responsibility for determining a Benchmark through the application of a formula or other method of calculating the information or expressions of opinions provided for that purpose, in accordance with the Methodology set out by the Administrator.
Expert Judgment	Refers to the exercise of discretion by an Administrator or Contributor with respect to the use of data in determining a Benchmark. Expert Judgment includes extrapolating values from prior or related transactions, adjusting values for factors that might influence the quality of data such as market events or impairment of a buyer or seller's credit quality, or weighting firm bids or offers greater than a particular concluded transaction.

² <http://www.iosco.org/library/pubdocs/pdf/IOSCOPD415.pdf>.

Term	Definition
Market Participants	Legal entities involved in the production, structuring, use or trading of financial contracts or financial instruments used to inform the Benchmark, or which reference the Benchmark.
Methodology	The written rules and procedures according to which information is collected and the Benchmark is determined.
Panel	Subset of Market Participants who are Benchmark Contributors.
Publish or Make Available	Refers to the expectation that a party such as an Administrator should provide a document or notice to Stakeholders. The means by which such notice is made should be proportionate to the breadth and depth of Benchmark use by Stakeholders, as determined by the Administrator on a "best efforts" basis. Ordinarily, posting a document or notice on the Administrator's website will meet this expectation.
Regulated Authority	A governmental or statutory body (not being a Self-Regulatory Organisation) with responsibility for securities and/or commodities and futures regulation.
Regulated Market or Exchange	A market or exchange that is regulated and/or supervised by a Regulatory Authority.
Self-Regulatory Organisation or "SRO"	An organisation that has been given the power or responsibility to regulate itself, whose rules are subject to meaningful sanctions regarding any part of the securities market or industry. This authority may be derived from a statutory delegation of power to a non-governmental entity or through a contract between an SRO and its members as is authorized or recognized by the governmental regulator.
Stakeholder	Refers to Subscribers and other persons or entities who own contracts or financial instruments that reference a Benchmark.
Subscriber	A person or entity that purchases Benchmark determination services from an Administrator.

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