

FTSE Canada Liquid Universe Bond Index Series

v4.2

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Section 1

Introduction

1. Introduction

1.1 FTSE Canada Liquid Universe Bond Index Series

1.1.1 The following indices are included in this series:

FTSE Canada Liquid Universe Bond Index
FTSE Canada Liquid Universe Capped Bond Index
FTSE Canada Liquid Short Term Capped Bond Index
FTSE Canada Liquid Corporate Bond Index
FTSE Canada Liquid Government Bond Index
FTSE Canada Ultra Liquid Long Term Government Bond Index

1.2 The FTSE Canada Liquid Universe Bond Index Series does not take account of ESG factors in its index design.

1.3 IOSCO

1.3.1 FTSE International Limited (FTSE) considers that the FTSE Canada Liquid Universe Bond Index meets the IOSCO Principles for Financial Benchmarks as published in July 2013.

Full details can be accessed at www.iosco.org.

Details of FTSE Russell's Statement of Compliance with respect to the IOSCO Principles can be accessed using the following link:

[IOSCO Statement of Compliance](#).

1.3.2 FTSE hereby notifies users of the index series that it is possible that circumstances, including external events beyond the control of FTSE, may necessitate changes to, or the cessation of, the index series and therefore, any financial contracts or other financial instruments that reference the index series or investment funds which use the index series to measure their performance should be able to withstand, or otherwise address the possibility of changes to, or cessation of, the index series.

1.3.3 Index users who choose to follow this index or to buy products that claim to follow this index should assess the merits of the index's rules-based methodology and take independent investment advice before investing their own or client funds. No liability whether as a result of negligence or otherwise is accepted by FTSE nor its subsidiary undertakings (or any person concerned with the preparation or publication of these Ground Rules) for any losses, damages, claims and expenses suffered by any person as a result of:

- any reliance on these Ground Rules, and/or
- any inaccuracies in these Ground Rules, and/or
- any non-application or misapplication of the policies or procedures described in these Ground Rules, and/or
- any inaccuracies in the compilation of the Index or any constituent data

1.4 These Ground Rules

- 1.4.1 This document sets out the Ground Rules for the construction and management of the FTSE Canada Liquid Universe Bond Index Series.

1.5 FTSE Russell

- 1.5.1 FTSE Russell is a trading name of FTSE International Limited, Frank Russell Company, FTSE Global Debt Capital Markets Limited (and its subsidiaries FTSE Global Debt Capital Markets Inc.), FTSE Fixed Income LLC, FTSE (Beijing) Consulting Limited.

1.6 Index Series Objectives

- 1.6.1 The FTSE Canada Liquid Universe Bond Index Series is designed to represent a universe of Liquid Quality issues in the Canadian bond market.

1.7 Index Ratings¹

- 1.7.1 Bonds in the index are classified based on publicly available information from Dominion Bond Rating Service, Standard and Poor's, Moody's Investors Service and Fitch. The index does not distinguish between minor ratings notches, such as plus or minus signs or their equivalent within a broad letter category. Thus, the ratings A+, A-, and A are viewed as equivalent for the purposes of the index. Additionally, the index does not take into account a rating agency's outlook for a credit rating, or whether a particular rating may be under review by an agency.

In cases where the agencies do not agree on the credit rating, the bond will be classified according to the following rules:

- If two agencies rate a security, use the lower of the two ratings;
- If three agencies rate a security, use the middle of the three ratings;
- If four agencies rate a security, use the middle of the three lowest ratings

These rules mean that a bond rated by two or more agencies must have at least two investment grade credit ratings to be eligible for the Universe Bond Index. For example, a new issue rated BBB- by S&P and BB+ by DBRS would be assigned a rating of BB for the purposes of the index, and would not be eligible for inclusion in the index.

- 1.7.2 An issuer rating may be applied for bonds classified as Government or Financial if security-level ratings are not available.
- 1.7.3 A rating that is un-solicited at issuance is not used for the purpose of determining index eligibility; however, if a rating is changed from solicited to un-solicited, it will still be incorporated.
- 1.7.4 Private ratings are not used for the purpose of determining index eligibility.

1.8 Capital Index (also known as the Price Index or the Clean Price Index)

- 1.8.1 The capital index tracks the notional weighted average change in the prices of the index constituents and is calculated every business day.

1.9 Total Return Index (also known as the Performance Index)

- 1.9.1 A total return index is calculated for all the indices. A total return index takes into account the price changes and interest accrual and payments of each index constituent.

¹ Effective 15 April 2019.

- 1.9.2 In addition to the Capital Index and Total Return Index, the following index analytics are also calculated:
- Average Coupon
 - Average Yield to Maturity
 - Average Time to Maturity
 - Value of 01
 - Average Macaulay Duration
 - Average Modified Duration
 - Average Convexity
 - The sum of the nominal value of all bonds in each index
 - The number of bonds in each Index, and
 - The weight of the index in relation to its relevant aggregated index (when applicable)
- 1.10 The base currency of the benchmark is Canadian Dollars (CAD).

Section 2

Management responsibilities

2. Management responsibilities

2.1 FTSE International Limited (FTSE)

2.1.1 FTSE is the benchmark administrator of the index series.²

2.1.2 FTSE is responsible for the operation of the FTSE Canada Universe Bond Index Series and will:

- maintain records of all the constituents;
- be responsible for the addition and deletion of bonds and changes of nominal amounts, in accordance with the Ground Rules.

2.1.3 These Ground Rules set out the methodology and provide information about the publication of the FTSE Canada Liquid Universe Bond Index Series.

2.2 FTSE Canada Fixed Income Advisory Committee

2.2.1 The FTSE Canada Fixed Income Advisory Committee is established by FTSE Russell.

2.2.2 The purpose of the Committee is to provide a forum for FTSE Russell to interact with index users and other stakeholders with a view to enhancing the underlying methodologies of FTSE Russell indices.

2.2.3 The Terms of Reference of the FTSE Canada Fixed Income Advisory Committee are set out on the FTSE Russell website and can be accessed using the following link:

[FTSE Canada Fixed Income Advisory Committee.pdf](#)

2.3 Amendments to these Ground Rules

2.3.1 These Ground Rules shall be subject to regular review (at least once a year) by FTSE Russell to ensure that they continue to best reflect the aims of the index series. Any proposals for significant amendments to these Ground Rules will be subject to consultation with FTSE Russell advisory committees and other stakeholders if appropriate. The feedback from these consultations will be considered by the FTSE Russell Index Governance Board before approval is granted.

2.3.2 As provided for in the Statement of Principles for FTSE Fixed Income Indices, where FTSE Russell determines that the Ground Rules are silent or do not specifically and unambiguously apply to the subject matter of any decision, any decision shall be based as far as practical on the Statement of Principles. After making any such determination, FTSE Russell shall advise the market of its decision at the earliest opportunity. Any such treatment will not be considered as an exception or change to the Ground Rules, or to set a precedent for future action, but FTSE Russell will consider whether the Rules should subsequently be updated to provide greater clarity.

² The term administrator is used in this document in the same sense as it is defined in [Regulation \(EU\) 2016/1011 of the European Parliament and of the Council of 8 June 2016 on indices used as benchmarks in financial instruments and financial contracts or to measure the performance of investment funds](#) (the European Benchmark Regulation) and [The Benchmarks \(Amendment and Transitional Provision\) \(EU Exit\) Regulations 2019](#) (the UK Benchmark Regulation).

Section 3

FTSE Russell index policies

3. FTSE Russell index policies

These Ground Rules should be read in conjunction with the following policy documents which can be accessed using the links below:

3.1 Queries and Complaints

FTSE Russell's complaints procedure can be accessed using the following link:

[Benchmark Determination Complaints Handling Policy.pdf](#)

3.2 Statement of Principles for FTSE Fixed Income Indices (the Statement of Principles)

Indices need to keep abreast of changing markets and the Ground Rules cannot anticipate every eventuality. Where the Ground Rules do not fully cover a specific event or development, FTSE Russell will determine the appropriate treatment by reference to the Statement of Principles for FTSE Fixed Income Indices which summarises the ethos underlying FTSE Russell's approach to index construction. The Statement of Principles is reviewed annually and any changes proposed by FTSE Russell are presented to the FTSE Russell Policy Advisory Board for discussion before approval by the FTSE Russell Index Governance Board.

The Statement of Principles for Fixed Income Indices can be accessed using the following link:

[Statement of Principles Fixed Income Indices.pdf](#)

3.3 Recalculation Policy and Guidelines

The Recalculation Policy and Guidelines for Fixed Income Indices document is available from the FTSE Russell website using the link below or by contacting fi.index@lseq.com.

[Fixed Income Recalculation Policy and Guidelines.pdf](#)

3.4 Index Policy in the Event Clients are Unable to Trade a Market or a Security

Details of FTSE Russell's treatment can be accessed using the following link:

[Index Policy in the Event Clients are Unable to Trade a Market or a Security.pdf](#)

3.5 Policy for Benchmark Methodology Changes

3.5.1 Details of FTSE Russell's policy for making benchmark methodology changes can be accessed using the following link:

[Policy for Benchmark Methodology Changes.pdf](#)

3.6 FTSE Russell Governance Framework

To oversee its indices, FTSE Russell employs a governance framework that encompasses product, service and technology governance. The framework incorporates the London Stock Exchange Group's three lines of defence risk management framework and is designed to meet the requirements of the IOSCO Principles for Financial Benchmarks³, the European benchmark regulation⁴ and the UK benchmark regulation⁵. The FTSE Russell Governance Framework can be accessed using the following link:

[FTSE Russell Governance Framework.pdf](#)

3.7 Real Time Status Definitions

3.7.1 Please refer to the following guide for details of real time status definitions for indices that are calculated in real time.

[Real Time Status Definitions.pdf](#)

³ IOSCO Principles for Financial Benchmarks Final Report, FR07/13 July 2013.

⁴ Regulation (EU) 2016/1011 of the European Parliament and of the Council of 8 June 2016 on indices used as benchmarks in financial instruments and financial contracts or to measure the performance of investment funds.

⁵ The Benchmarks (Amendment and Transitional Provision) (EU Exit) Regulations 2019.

Section 4

Eligibility criteria

4. Eligibility criteria

4.1 Eligible Bonds

- 4.1.1 The FTSE Canada Liquid Universe Bond Index consists of bonds selected from the constituents of the FTSE Canada Universe Bond Index with additional requirements for liquidity, issue size, and credit rating set out below.
- 4.1.2 The FTSE Canada Liquid Universe Capped Bond Index and the FTSE Canada Liquid Short Term Capped Bond Index are blended indices constructed from the constituents of the FTSE Canada Liquid Universe Bond Index with additional weight and maturity limits set out below.
- 4.1.3 The FTSE Canada Liquid Universe Corporate Bond Index consists of corporate bonds selected from the constituents of the FTSE Canada Universe Bond Index with additional requirements for liquidity, issue size, and credit rating set out below.
- 4.1.4 The FTSE Canada Liquid Universe Government Bond Index consists of Government bonds selected from the constituents of the FTSE Canada Universe Bond Index with additional requirements for liquidity, issue size, and credit rating set out below.
- 4.1.5 The FTSE Canada Ultra Liquid Long Term Government Bond Index consist of Government bonds selected from the constituents of the FTSE Canada Universe Bond Index with additional requirements for term, liquidity, issue size, and credit rating set out below.
- 4.1.6 In order to be eligible for the indices bonds must have a price assigned from a price source as specified in Section 5 of these Ground Rules.

4.2 Exclusions

- 4.2.1 Effective 15 August 2017, non-viability contingent capital bonds (NVCC) are excluded from the FTSE Canada Liquid Universe Capped Bond Index and the FTSE Canada Liquid Short Term Capped Bond Index, On the close of 15 August 2017, the FTSE Canada Liquid Universe Capped Bond Index and the FTSE Canada Liquid Short Term Capped Bond Index will have a one off rebalance to remove any NVCC bonds.
- 4.2.2 Regulatory capital that counts towards Additional Tier 1 (AT1) debt for deposit taking institutions, Tier 1 capital for life insurers, and Category B capital for property and casualty, and mortgage insurers is excluded.

4.3 Liquidity Thresholds

- 4.3.1 In order to be eligible for the FTSE Canada Liquid indices, bonds must the meet the following liquidity thresholds on the quarterly liquidity review dates as specified in Section 6:
- Annual Trade Volume of 60 individual trades of \$500k or higher and 15 individual trades in the last quarter
- or
- Average quarterly traded volume of 20 individual trades of \$500k or higher

4.4 Ratings

Bonds must have an index rating of at least A.

4.5 Minimum and Maximum Maturity

The minimum maturity requirement is the same as FTSE Canada Universe Bond index. The minimum remaining maturity for the FTSE Canada Ultra Liquid Long Term Government index is greater than 10 years as of the Rebalance Dates, as specified in Section 6. The maximum maturity for bonds in the FTSE Canada Liquid Short Term Capped Bond Index is less than 5 years.

4.6 Minimum Issue Size

The following minimum issue sizes apply:

FTSE Canada Liquid Universe Bond Index	\$300 Million
FTSE Canada Liquid Universe Capped Bond Index	\$300 Million
FTSE Canada Liquid Short Term Capped Bond Index	\$300 Million
FTSE Canada Liquid Corporate Bond Index	\$300 Million
FTSE Canada Liquid Government Bond Index	\$300 Million
FTSE Canada Ultra Liquid Long Term Government Bond Index	\$1 Billion

Section 5

Price sources

5. Price sources

- 5.1 Constituents prices are provided by CanDeal Data and Analytics (“CanDeal DNA”) in accordance with its Composite pricing methodology.⁶
- 5.2 Prices in the FTSE Canada Bond Index Series represent a mid-side price as of 4:00 pm (Toronto time), unless otherwise stated in published index methodologies.
- 5.3 Verification and price challenges**
 - 5.3.1 Statistical techniques are used to identify pricing anomalies based on day-over-day changes and comparisons across peer groups by maturity, asset type, etc.
 - 5.3.2 Any price challenges from index users and possible outliers from the verification process are reviewed with our third-party pricing provider.
 - 5.3.3 In the event that an issue is not able to be resolved in a timely manner, FTSE Russell may exercise expert judgement and roll prices from the previous day. Any exercise of expert judgement is recorded.

⁶ The change from the use of the FTSE Canada Multi Dealer Pricing Methodology to use the CanDeal DNA composite pricing methodology was announced on 22 January 2022 and effective from 17 May 2022.

Section 6

Periodic change to the portfolios

6. Periodic change to the portfolios

6.1 Rebalancing the Indices

- 6.1.1 The FTSE Canada Liquid Universe Bond Indices are rebalanced on a daily basis to account for addition of new issues, removal of issues for ratings downgrade, removal of issues due to remaining term to maturity, and maintenance of value weights.
- 6.1.2 Effective July 1, 2025, the FTSE Canada Ultra Liquid Long Term Government Bond Index is to be rebalanced monthly at the close of the last business day of each month (Rebalance Date). Intra-month, the market weights will fluctuate according to price movements, but the par amount of each constituent will be held constant unless there is a full call corporate action which would cause the bond to exit on the call date at call price. The Selection Date for the rebalance is the 5th last business day of the rebalance month. All the cash flow generated from the index constituents during a month will be reinvested into the index daily. Partial calls or other reduction in shares outstanding result in a proportionate reduction in the amount considered by the index on the effective change date at the following Rebalance Date.
- 6.1.3 The FTSE Canada Liquid Universe Bond Indices are reviewed quarterly (at the end of March, June, September, and December) for addition and deletion of securities based on liquidity threshold, as specified in Section 4.3. The addition and deletion will be implemented on the last business day of March, June, September, and December accordingly.

6.2 Addition of Constituents

- 6.2.1 A new issue enters the index on/after the day it is issued or auctioned if it meets the eligibility criteria (when all eligibility criteria are verified).
- 6.2.2 An old issue that was previously ineligible due to insufficient amount outstanding can enter the index on/after the day it is reissued and meets the eligibility criteria. If the issue has previously been reviewed for liquidity threshold as specified in Section 4.3 and did not pass the threshold criteria, it will be reviewed again for liquidity threshold in the next quarterly cycle as specified in Section 6.1.2 and enter on the last business day of the review month.
- 6.2.3 Effective July 1, 2025, new issues will be reviewed for the FTSE Canada Ultra Liquid Long Term Government Bond Index on the monthly Selection Dates and enter on the Rebalance Date if it meets the eligibility criteria.

6.3 Removal of Constituents

- 6.3.1 A bond is removed from the index on the day its remaining effective term to maturity declines to one calendar year, whether that year has 365 or 366 days. Bonds are removed from the FTSE Canada Ultra Liquid Long Term Government Bond Index on the day the remaining effective term to maturity declines below 10 years.
- 6.3.2 Effective July 1, 2025, bonds are removed on the monthly Rebalance Date from the FTSE Canada Ultra Liquid Long Term Government Bond Index when their remaining effective term to maturity falls under 10 years as of the monthly Rebalance Date.

6.3.3 When a bond defaults or is downgraded below A, it is removed from the index on the day of the initial default or downgrade.

6.4 Capping

6.4.1 For the FTSE Canada Liquid Universe Capped Bond Index and the FTSE Canada Liquid Short Term Capped Bond Index, the weight of the Corporate and Government sectors is fixed at 40% and 60% respectively. These weights are reset on a daily basis.

Appendix A

Index calculations

The following notation is used in the following calculations:

$P_{i,t}$	clean price of a constituent bond i on valuation day t
$A_{i,t}$	accrued interest of a constituent bond i as of valuation day t
$N_{i,t}$	nominal value of a constituent bond i on valuation day t
$Coupon_i$	coupon rate of a constituent bond i
$y_{i,t}$	yield to maturity of a constituent bond i as of valuation day t
$MacDur_{i,t}$	Macaulay duration of a constituent bond i as of valuation day t
$ModDur_{i,t}$	Modified duration of a constituent bond i as of valuation day t
$Dval01_{i,t}$	Dollar duration of a constituent bond i as of valuation day t
$Convexity_{i,t}$	Convexity of a constituent bond i as of valuation day t
$C_{i,t}$	value of any coupon payment received from the bond i for the assumed settlement date at time t . If none the value = 0

Clean Price Index (Capital Index)

The clean price (PI) or capital index is given by

$$PI_{i,0} = 100$$

$$PI_{i,t} = PI_{i,t-1} \times \frac{\sum_i P_{i,t} \times N_{i,t-1}}{\sum_i P_{i,t-1} \times N_{i,t-1}}$$

Total Return Index

The total return index (TRI) is given by

$$TRI_{i,0} = 100$$

$$TRI_{i,t} = TRI_{i,t-1} \times \frac{\sum_i (P_{i,t} + A_{i,t} + C_{i,t}) \times N_{i,t-1}}{\sum_i (P_{i,t-1} + A_{i,t-1}) \times N_{i,t-1}}$$

Average Coupon

The index level average coupon (C) is given by

$$C_t = \frac{\sum_i (P_{i,t} + A_{i,t}) \times N_{i,t} \times Coupon_i}{\sum_i (P_{i,t} + A_{i,t}) \times N_{i,t}}$$

Average Yield to Maturity

The index level average yield to maturity (Y) is given by

$$Y_t = \frac{\sum_i (P_{i,t} + A_{i,t}) \times N_{i,t} \times y_{i,t}}{\sum_i (P_{i,t} + A_{i,t}) \times N_{i,t}}$$

Average Macaulay Duration

The index level average Macaulay duration (D) is given by

$$D_t = \frac{\sum_i (P_{i,t} + A_{i,t}) \times N_{i,t} \times MacDur_{i,t}}{\sum_i (P_{i,t} + A_{i,t}) \times N_{i,t}}$$

Average Modified Duration

The index level average Modified duration (MD) is given by

$$MD_t = \frac{\sum_i (P_{i,t} + A_{i,t}) \times N_{i,t} \times ModDur_{i,t}}{\sum_i (P_{i,t} + A_{i,t}) \times N_{i,t}}$$

Average Value of 01

The index level average value of Dval01 ($DV01$) is given by

$$DV01_t = \frac{\sum_i (P_{i,t} + A_{i,t}) \times N_{i,t} \times Dval01_{i,t}}{\sum_i (P_{i,t} + A_{i,t}) \times N_{i,t}}$$

Average Convexity

The index level average convexity ($Conv$) is given by

$$Conv_x_t = \frac{\sum_i (P_{i,t} + A_{i,t}) \times N_{i,t} \times Convexity_{i,t}}{\sum_i (P_{i,t} + A_{i,t}) \times N_{i,t}}$$

Appendix B

Further information

A Glossary of Terms used in FTSE Russell's Ground Rule documents can be found using the following link:

[Fixed Income Glossary of Terms.pdf](#)

For further information on the FTSE Canada Liquid Universe Bond Index Ground Rules please visit www.lseg.com/en/ftse-russell/ or e-mail fi.index@lseg.com. Contact details can also be found on this website.

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