Ground Rules

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FTSE Canada 0+ Year Universe Bond Index Series

v3.1



lseg.com/en/ftse-russell

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Section 1 Introduction

1. Introduction

1.1 FTSE Canada 0+ Year Universe Bond Index Series.

- 1.1.1 The FTSE Canada 0+ Year Universe Bond Index Series tracks the universe of securities that meet the eligibility criteria for the FTSE Canada Universe Bond Index through maturity.
- 1.1.2 The FTSE Canada 0+ Year Universe Bond Index Series Ground Rules should be read in conjunction with the FTSE Canada Universe Bond Index Series Ground Rules¹.

FTSE_Canada_Universe_Bond_Index_Series.pdf

- 1.2 The FTSE Canada 0+ Year Universe Bond Index Series does not take account of ESG factors in its index design.
- 1.3 FTSE hereby notifies users of the indices that it is possible that circumstances, including external events beyond the control of FTSE, may necessitate changes to, or the cessation of, the indices and therefore, any financial contracts or other financial instruments that reference the indices or investment funds which use the indices to measure their performance should be able to withstand, or otherwise address the possibility of changes to, or cessation of, the indices.
- 1.4 Index users who choose to follow these indices or to buy products that claim to follow these indices should assess the merits of the indices' 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 Indices or any constituent data.

1.5 These Ground Rules

1.5.1 This document sets out the Ground Rules for the construction and management of the FTSE Canada 0+ Year Universe Bond Indices.

1.6 FTSE Russell

1.6.1 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. and FTSE Fixed Income Europe Limited), FTSE Fixed Income LLC, FTSE (Beijing) Consulting Limited, Refinitiv Benchmark Services (UK) Limited, Refinitiv Limited and Beyond Ratings.

¹ On 1 January 2025, rule changed to include Maple bonds, defined as securities issued by entities incorporated outside of Canada, issued and settled on or after that date.

1.7 Index objectives

1.7.1 The FTSE Canada 0+ Year Universe Bond Index is designed to be a broad measure of the Canadian investment-grade fixed income market for government, quasi-government and corporate bonds. It includes securities issued by entities incorporated both in Canada and outside of Canada. Securities remain eligible for the index through maturity, rather than exiting once they fall below one year to maturity. They are transparent indices and are designed to be replicable with individual security holdings and prices disclosed electronically each day.

The index returns are calculated daily, and are weighted by market capitalization, so that the return on a bond influences the return on the index in proportion to its market value.

1.8 Major sub-indices

- 1.8.1 A sub-index will be created if a sufficient number of eligible constituents for that sub-index exist.
- 1.8.2 The FTSE Canada 0-1 Year Universe Index will be offered as a flagship sub-index of the FTSE Canada 0+ Year Universe Bond Index. The following sub-indices by maturity will be produced for the universe of securities that falls below one year to maturity:
 - 0-1 Month
 - 0-3 Month
 - 1-3 Month
 - 3-6 Month
 - 6-12 Month
- 1.8.3 Sub-indices for the 0+ Year Universe Index and 0-1 Year Universe Index are also calculated based on the issuer sector classification of each bond. The government segment, for example, is divided into Federal, Provincial and Municipal sectors. The Corporate segment is divided into sub-sectors based on major industry groups: Financial, Communication, Industrial, Energy, Infrastructure, Real Estate, and Securitization. The full classification schema is detailed in Appendix A.
- 1.8.4 Corporate sub-indices for the 0+ Year Universe Index and 0-1 Year Universe Index calculate based on rating categories, as defined in Rule 4.4:
 - AAA/AA
 - A
 - BBB
- 1.8.5 Sub-indices are calculated based on the country assignment of the issuer, specifically Domestic only subindices which include bonds from those issuers with a country assignment of Canada, as defined in Rule 4.5. These indices follow the same naming convention of other indices, but will also include the word "Domestic" in the name, for example:
 - Domestic Universe
 - Domestic Corporate
 - Domestic Government

Additionally, sub-indices that include Maple bonds only are produced.

- **1.9** Capital index (also known as the Price Index or the Clean Price Index)
- 1.9.1 The capital index tracks the notional weighted average change in the prices of the index constituents and is calculated every business day.
- **1.10 Total return index** (also known as the Performance Index)
- 1.10.1 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.

1.11 Index analytics

- 1.11.1 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).

The formulae to calculate the capital and total return indices, and the index analytics are available in Appendix B.

1.12 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 daily calculation, production and operation of the FTSE Canada 0+ Year 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 0+ Year 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 Ground 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 <u>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 <u>The Benchmarks (Amendment and Transitional Provision) (EU Exit) Regulations 2019</u> (the UK Benchmark Regulation).</u>

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:

FTSE_Russell_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 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 <u>fi.index@lseg.com</u>.

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

3.6.1 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

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 To be eligible for the FTSE Canada 0+ Year Universe Bond Index Series, bonds must have been issued with at least one year to maturity and have previously qualified for the FTSE Canada Universe Bond Index Series.
- 4.1.2 For bonds with effective maturity date prior to September 30, 2024, bonds must have a remaining effective term to maturity of greater than 5 days. For bonds with effective maturity date on or after September 30, 2024, bonds must have a remaining effective term to maturity of greater than 1 day.
- 4.1.3 All issuer sector classifications and issuer country assignment follow those of the FTSE Canada Universe Bond Index Series.
- 4.1.4 On 1 January 2025, a rule <u>change</u> was implemented to include Maple bonds issued and settled on or after that date in the FTSE Canada 0+ Year Universe Bond Index.
- 4.1.5 In order to be eligible for the index, bonds must have a price assigned from a price source as specified in Section 5 of these Ground Rules.

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 0+ Year Universe Bond Index represent a mid-side price as of 4:00 p.m. (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 use the price 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 Index rebalancing

6. Index rebalancing

- 6.1 Rebalancing the Indices
- 6.1.1 The indices are rebalanced on a daily basis.

6.2 Addition of constituents

- 6.2.1 A new issue enters the index on the day it is issued or auctioned. The bond is included in the calculation of index risk statistics such as duration on the day of issue, though it does not affect the return on the index until the following business day. The new security does not begin to accrue interest until the new issue settlement date.
- 6.2.2 The cut-off time for inclusion on the day of issue is 3:00 p.m. EST.

6.3 Removal of constituents

6.3.1 For bonds with effective maturity date prior to September 30, 2024, a bond is removed from the index on the day its remaining effective term to maturity reaches T-5 days from its effective maturity date. Fixed-to-variable securities exit the index T-5 days from their initial rate reset date based on assignment of effective maturity date for index purposes.

For bonds with effective maturity date on or after September 30, 2024, a bond is removed from the index on the last business day prior to its maturity date. Fixed-to-variable securities exit the index on the last business day before their initial rate reset date based on assignment of effective maturity date for index purposes.

For a bond with embedded option features, the rule for moving from one term category to another, and for rolling out of the index, is based on effective term (either the option exercise date, or the final maturity date), since these bonds are classified into index term categories according to effective term. Realised coupon and redemption income is reinvested daily across all bonds in the index in proportion to their market values.

6.3.2 When a bond defaults or is downgraded below BBB, it is removed from the index 30 days after the initial default or downgrade. Ratings changes between investment grade categories, for example from A to BBB, is reflected without a pre-determined delay once the rating action is verified.

6.4 Corporate actions

- 6.4.1 The following corporate action events are reflected in the index on their effective date:
 - Unscheduled redemptions or repurchases, including puts or calls;
 - Coupons which step up or down due to a specific trigger event, for example rating-driven bonds or sustainability-linked bonds;
 - Bonds which funge into an existing bond

Appendix A Index family structure

The table contains the classification scheme used to assign an issuer sector within the indices:

Level 1	Level 2	Level 3
Corporate	Communication	Media
		Telecommunication
	Energy	Distribution
		Exploration
		Generation
		Integrated
		Pipelines
	Financial	Auto Finance
		Bank
		Insurance
		Financial Services
	Industrial	Consumer
		Diversified
		Manufacturing
		Resources
		Services
		Transportation
	Infrastructure	Health
		Transportation
		Utility
		Education
	Real Estate	NonREIT
		REIT
	Securitization	ABS
		CMBS

Level 1	Level 2	Level 3
Government	Federal	Non-Agency
		Agency
		Sovereign, Supranational and Foreign Agency ⁷
	Municipal	-
	Provincial	Alberta
		British Columbia
		Manitoba
		New Brunswick
		Newfoundland
		Nova Scotia
		Ontario
		PEI
		Quebec
		Saskatchewan
		Northwest Territories
		Nunavut
		Yukon

⁷ Prior to 1 January 2025, this sector was named "Supranational".

Appendix B 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
- $C_{i,t} \qquad \mbox{value of any coupon payment received from the bond i for the assumed settlement date at time t . If none the value = 0$

Clean Price Index (Capital Index)

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

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

$$PI_{i,t} = PI_{i,t-1} \times \frac{\sum \left[P_{i,t} \times N_{i,t-1}\right]}{\sum \left[P_{i,t-1} \times N_{i,t-1}\right]}$$

Total Return Index

The total return index (TRI) is given by

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

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

Appendix C 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 0+ Year Universe Bond Index Series Ground Rules please visit <u>www.lseg.com/en/ftse-russell/</u> or e-mail <u>fi.index@lseg.com</u>. Contact details can also be found on this website.

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