

FTSE Canada Universe Discount Bond Index

v3.5



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Section 1

Introduction

1. Introduction

1.1 FTSE Canada Universe Discount Bond Index

1.1.1 The FTSE Canada Universe Discount Bond Index attempts to achieve a risk/return profile similar to that of the FTSE Canada Universe Bond Index. The FTSE Canada Discount Bond Index consists of bonds drawn from the FTSE Canada Universe Bond Index whose coupon is equal to or less than 1.2 times the bond's yield to maturity at the time of addition to the index. The index is rebalanced on a quarterly basis, and the weights of the constituents are adjusted so that the index duration and sector profile closely match that of the FTSE Canada Universe Bond Index.

1.1.2 The index consists of investment grade bonds issued by the following categories of borrowers:

- Government of Canada
- Provincial & Municipal Governments
- Corporates

1.2 The FTSE Canada Universe Discount Bond Index 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 Universe Discount 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 through the following link:

[IOSCO Statement of Compliance](#)

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

1.5 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.

1.6 These Ground Rules

- 1.6.1 This document sets out the Ground Rules for the construction and management of the FTSE Canada Universe Discount Bond Index.

1.7 FTSE Russell

- 1.7.1 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.

1.8 Total return index (also known as the Performance Index)

- 1.8.1 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.

1.9 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 Index analytics

- 1.10.1 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.

- 1.11 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 index¹.

2.1.2 FTSE is responsible for the daily calculation, production and 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 Universe Discount 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 through 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. 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.

¹ 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 through the links below:

3.1 Queries and Complaints

FTSE Russell's complaints procedure can be accessed through 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 through 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 through the link below or by contacting fi.index@lseg.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 through 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 through 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 Benchmarks², the European benchmark regulation³ and the UK benchmark regulation⁴. The FTSE Russell Governance Framework can be accessed through 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](#)

² IOSCO Principles for Financial Benchmarks Final Report, FR07/13 July 2013.

³ 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.

⁴ The Benchmarks (Amendment and Transitional Provision) (EU Exit) Regulations 2019.

Section 4

Eligibility criteria

4. Eligibility criteria

4.1 Eligible bonds

- 4.1.1 In order for a security to be considered for inclusion into the FTSE Canada Universe Discount Bond Index, it must be a member of the FTSE Canada Universe Bond Index (Universe Index) as of the rebalancing date.
- 4.1.2 The FTSE Canada Universe Discount Bond Index consists of investment grade bonds which are issued in Canadian Dollars by the Government of Canada, Canadian Provincial and Municipal Governments and Canadian Corporations. For further details, please see the Ground Rules for the FTSE Canada Universe Bond Index Series.
- 4.1.3 On a quarterly basis, securities of the FTSE Canada Universe Bond Index are screened.
- As of the Selection Date:
- For securities that are not currently index constituents, they need to have a coupon equal to or less than 1.2 times the yield to maturity (YTM) of the security to be eligible for inclusion in the FTSE Canada Universe Discount Bond Index;
 - For securities that are currently index constituents, they need to have a coupon equal to or less than 1.4 times the yield to maturity (YTM) of the security to be eligible for remaining in the FTSE Canada Universe Discount Bond Index;
 - On the quarterly selection date, the multiple may be reviewed and potentially updated as market conditions change to allow for a representative number of securities to be considered for eligibility. Any changes to the multiple will be announced in accordance with procedures.
- 4.1.4 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.

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.⁵
- 5.2 Prices in the FTSE Canada Bond Index Series represent a mid-side price as of 4:00pm (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.

⁵ 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 Rebalance schedule

6.1.1 The FTSE Canada Universe Discount Bond Index is rebalanced on a quarterly basis (January, April, July, October), on the last business day of the quarter. The cut-off date (Selection Date) for constituent selection is 1 calendar week before the last business day of the quarter.

6.2 Addition of constituents

6.2.1 Bonds that meet the eligibility criteria (as defined in Section 4) as of the Selection Date are added to the index on the rebalancing date and are included in the total returns from the first day of the following quarter.

6.3 Removal of constituents

6.3.1 Constituents will be removed from the index on the quarterly rebalancing date, if they no longer meet the eligibility criteria as defined in Section 4 as of the Selection Date.

6.3.2 Constituents may be removed from the index in between rebalance dates if they are fully redeemed. The weight of the removed bond(s) will be redistributed proportionally among the remaining constituents.

6.4 Weights

6.4.1 Once the constituents have been selected, their notional amounts are adjusted through an optimisation procedure to meet the conditions shown below. By satisfying these conditions the FTSE Canada Universe Discount Bond Index is designed to have a similar risk/return profile to that of the FTSE Canada Universe Bond Index.

1. The market value sector weights of the Government (Federal, Provincial and Municipal) and Corporate sectors are constrained to fall within +/- 1% of their respective market value sector weights in the FTSE Canada Universe Bond Index, as of the rebalance date.
2. The Corporate sector ratings are constrained to be within +/- 0.1 of their respective ratings in the Universe Bond Index, as of the rebalance date. In conversion, the AAA rating is 5, AA rating is 4, and so on.
3. The overall modified duration of the constituents is constrained to fall within +/- 0.05 of the Universe Bond Index.

The weights are adjusted to minimise the difference to market capitalisation weights through an optimisation procedure while satisfying the overall constraints shown above. The objective and constraints are designed to minimise tracking errors between the Universe Discount Bond Index and Universe Bond Index.

Appendix A

Index family structure

The table below describes the schema used to classify the index constituents and for the derivation of sub-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
	Securitisation	ABS
		CMBS

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

Appendix B

Index formulae

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
$C_{i,t}$	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

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

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

Appendix C

Further information

A glossary of terms used in FTSE Russell's Ground Rule documents can be found through the following link:

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

For further information on the FTSE Canada Universe Discount Bond Index Series 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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