

# FTSE Canada 1-5 Year All Government Laddered Bond Index

v3.0



**FTSE  
RUSSELL**

An LSEG Business

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## Section 1

# Introduction

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## 1. Introduction

### 1.1 FTSE Canada 1-5 Year All Government Laddered Bond Index

1.1.1 The FTSE Canada 1-5 Year All Government Laddered Bond Index measures the return of a 1-5 year bond ladder in Government Bonds.

1.2 The FTSE Canada 1-5 Year All Government Laddered 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 1-5 Year All Government Laddered Bond Index meets the IOSCO Principles for Financial Benchmarks as published in July 2013.

Full details can be accessed at [www.iosco.org](http://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.](#)

1.4 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 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 1-5 Year All Government Laddered Bond Index.

## **1.7 FTSE Russell**

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, The Yield Book Inc and Beyond Ratings.

## **1.8 Index Series objectives**

- 1.8.1 The FTSE Canada 1-5 Year All Government Laddered Bond Index measures the return of a 1-5 year bond ladder in Government Bonds. Selected securities are placed into five maturity buckets. Maturity buckets are 1-1.99 years, 2-2.99 years, 3-3.99 years, 4-4.99 years, and 5-5.99 years. On each annual rebalancing, the bonds from each maturity roll out to the next lower bucket. Bonds with a remaining maturity of less than one year are sold, with the proceeds being used to invest in the longest maturity bucket.

## **1.9 Index ratings<sup>1</sup>**

- 1.9.1 Bonds in the index are classified based on information from Dominion Bond Rating Service, Standard and Poor's Corporation, 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

- 1.9.2 An issuer rating may be applied for bonds classified as Government or Financial if security-level ratings are not available.

## **1.10 Capital Index** (also known as the Price Index or the Clean Price Index)

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

## **1.11 Total Return Index** (also known as the Performance Index)

- 1.11.1 A total return index is calculated for the index. A total return index takes into account the price changes and interest accrual and payments of each bond. 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

- 1.12 The base currency of the benchmark is Canadian Dollars (CAD).

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<sup>1</sup> Effective 15 April 2019.

## Section 2

# Management responsibilities

## 2. Management responsibilities

### 2.1 FTSE International Limited (FTSE)

2.1.1 FTSE is the benchmark administrator of the index.<sup>2</sup>

2.1.2 FTSE is responsible for the daily calculation, production and operation of the FTSE Canada 1-5 Year All Government Laddered Bond Index and will:

- maintains 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 1-5 Year All Government Laddered Bond Index.

### 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 Indices Advisory Committee are set out on the FTSE Russell website and can be accessed using the following link:

[FTSE Canada Fixed Income Indices 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.

<sup>2</sup> 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 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@lseg.com](mailto:fi.index@lseg.com).

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

#### 3.3 Policy for Benchmark Methodology Changes

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

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

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

3.4.1 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 FTSE Russell Governance Framework

3.5.1 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 Benchmarks<sup>3</sup>, the European benchmark regulation<sup>4</sup> and the UK benchmark regulation<sup>5</sup>. The FTSE Russell Governance Framework can be accessed using the following link:

[FTSE Russell Governance Framework.pdf](#)

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

<sup>4</sup> 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.

<sup>5</sup> The Benchmarks (Amendment and Transitional Provision) (EU Exit) Regulations 2019.

## Section 4

# Eligibility criteria

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## 4. Eligibility criteria

### 4.1 Eligible bonds

4.1.1 The FTSE Canada 1-5 Year All Government Laddered Bond Index consists of bonds issues by the Government of Canada, Agencies, Provinces, and Municipalities in proportions set out below, which are constituents of the FTSE Canada Universe Bond Index at the time they are selected.

4.1.2 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 Minimum issue size

Minimum issue size is \$500 million.

### 4.3 Liquidity

At the time of being added to the index bonds must have recorded at least 20 trades of size \$500k or greater over the 3 months preceding the Selection Date, as reported by the Canadian Depository for Securities (CDS). The trading requirement is waived for bonds issued in the most recent 3 months.

### 4.4 Structure

Amortizing structures are excluded.

### 4.5 Rating

Bonds rated BBB or higher are eligible.

## Section 5

# Price sources

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## 5. Price sources

- 5.1 Constituents prices are provided by CanDeal Data and Analytics (“CanDeal DNA”) in accordance with its Composite pricing methodology.<sup>6</sup>
- 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.

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<sup>6</sup> 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 changes to the portfolios

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## 6. Periodic changes to the portfolios

### 6.1 Rebalancing the Indices

- 6.1.1 The FTSE Canada 1-5 Year All Government Laddered Bond Index is reviewed annually on 15 June, and the selection date for determining eligible bonds is 31 May.

### 6.2 Rolling buckets

- 6.2.1 Bonds roll out to the next lower bucket on the review date. Bonds with less than 1 year to maturity roll out of the first bucket at mid-market prices on that day. The index will reinvest the full market value of all roll out securities into the longest bucket at full units.

### 6.3 Addition of constituents

- 6.3.1 New bonds will be added to the 5-6 year maturity bucket by selecting the highest yield to maturity within the range.

- 6.3.2 The target number of bonds in a rung will be 10. If fewer than the target number of bonds qualify as eligible, the rung will be created with as many bonds as qualify. All bonds will be weighted equally.

At the annual reconstitution, bonds are added when creating a new rung on the ladder or when an existing rung has fewer than the target number of bonds.

The process for adding new bonds is to repeat the following steps until the desired number of bonds is added:

- Identify eligible bonds with the desired maturity range (5-6 years for a new ladder rung)
- Order the bonds by yield and select the highest yielding bonds within the desired maturity range
- If the next bond on the list will cause the exposure to Provincial Bonds to exceed 40% or Municipal Bonds to exceed 20% in the index after reweighting of constituents from other existing buckets, skip this bond and evaluate the following bond on the list.

### 6.4 Reweighting of constituents

At the annual review, any constituent whose weight has moved by more than ten percent away from equal weight is reweighted back to equal weight.

## Section 7

# Changes to constituents

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## 7. Changes to constituents

### 7.1 Intra review changes

- 7.1.1 In the case that a constituent bond is fully or partially called, it will be removed from the index on the call date, and replaced with a bond selected on the Selection Date (as defined in Rule 7.2) using the logic described in Rule 6.3.2.
- 7.1.2 A bond that is downgraded below BBB will be replaced on the fifteenth day of the following month with a bond selected on the Selection Date (as defined in Rule 7.2) using the addition logic described in Rule 6.3.2.
- 7.1.3 If no replacement bond(s) can be found, the weight of the removed bond(s) will be equally distributed amongst the constituents in the same rung of the ladder.
- 7.1.4 If the removal date of a constituent bond, i.e. its call date or downgrade replacement date, falls within a one month period preceding the next scheduled rebalance, the proceeds of the removed bonds will be re-invested in the on-the-run 91-day Government of Canada Treasury bill on the removal date.
- 7.1.5 If the call date or downgrade replacement date of a constituent bond falls on a weekend or holiday, the removal will be implemented on the last business day prior to the call date or downgrade replacement date.

### 7.2 Selection date

- 7.2.1 The date for selecting replacement bonds in Rule 7.1 will be the later of:
- 5 business days prior to the removal date of a bond that has been called or downgraded;
  - the date when the call or downgrade is announced.

## 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

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

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

## Appendix B

# Further information

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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 1-5 Year All Government Laddered Bond Index Series Ground Rules please visit [www.lseg.com/en/ftse-russell/](http://www.lseg.com/en/ftse-russell/) or e-mail [fi.index@lseg.com](mailto:fi.index@lseg.com). Contact details can also be found on this website.

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