FTSE Canada HYBrid Bond Index

v3.7



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Introduction

1. Introduction

1.1 FTSE Canada HYBrid Bond Index

- 1.1.1 This document sets out the Ground Rules for the construction and management of the FTSE Canada HYBrid Bond Index.
- 1.1.2 The FTSE Canada HYBrid Bond Index Ground Rules should be read in conjunction with the <u>FTSE Canada Universe Bond Index Series Ground Rules</u> and the <u>FTSE Canada High Yield Bond Index Series Ground Rules</u>.
- 1.2 The FTSE Canada HYBrid 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 HYBrid 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

- 1.4 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 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.
- 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

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1.6 Index Series objectives

1.6.1 The FTSE Canada HYBrid Bond Index is designed to be a broad measure of the Canadian Corporate BBB and lower rated fixed income market, combining the investment grade FTSE Canada Universe Corporate BBB Bond Index and the non-investment grade FTSE Canada High Yield Bond Index, which is composed of securities rated below BBB.

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 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 rechanges and interest accrual and payments of each index constituent.
- 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).

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Management responsibilities

Management responsibilities

2.1 FTSE International Limited (FTSE)

- 2.1.1 FTSE is the benchmark administrator of the index.¹
- 2.1.2 FTSE is responsible for the daily calculation, production and operation of the FTSE Canada HYBrid Bond Index 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 HYBrid 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 to interact with index users and other stakeholders with a view to enhancing the underlying methodologies of FTSE 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. 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.

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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).

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

Fixed_Income_Recalculation_Policy_and_Guidelines.pdf

3.4 Policy for Benchmark Methodology Changes

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

Policy_for_Benchmark_Methodology_Changes.pdf

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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 Benchmarks², the European benchmark regulation³ and the UK benchmark regulation⁴. The FTSE Russell Governance Framework can be accessed using the following link:

FTSE Russell Governance Framework.pdf

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

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.

Eligibility criteria

4. Eligibility criteria

4.1 Eligible bonds

- 4.1.1 To be eligible for the FTSE Canada HYBrid Bond Index, bonds must qualify for the FTSE Canada Corporate Bond Index or the FTSE Canada High Yield Bond Index.
- 4.1.2 Bonds must have an index credit rating of BBB or below, based on the FTSE Canada Bond Index Series methodology.
- 4.1.3 Non-viability contingent capital bonds (NVCC) are excluded.
- 4.1.4 Securities are weighted by market capitalization.

The BBB portion of the index is subject to a Market Value Capping in accordance with the ranges specified in Section 6. The high yield portion of the index is not subject to a Market Value Capping.

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Price sources

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 4:00 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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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.

Index rebalancing and weighting

6. Index rebalancing

6.1 Rebalancing the Indices

6.1.1 The indices are rebalanced on a daily basis for additions and removals.

6.2 Addition of constituents

A new issue enters the index on/after the day it is issued or auctioned (when all eligibility criteria are verified). 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. The cut-off time for inclusion on the day of issue is 3:00 pm EST.

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.
- 6.3.2 When a bond defaults, it is removed from the index 90 days after the initial default.

6.4 Market value capping

6.4.1 A quarterly review takes place on the last business day of January, April, July, and October to cap the market value weight of each security that is eligible for the BBB portion of the index according to the following schedule:

Market Value of Eligible BBB Securities	Market Value Cap
\$0 – 15 billion	100%
\$16 – 30 billion	50%
\$31 – 100 billion	35%
\$101 – 300 billion	30%
\$301 – 400 billion	27.5%
\$401 – 500 billion	25%
\$501 – 600 billion	22.5%

The Market Value Cap is reduced by additional 2.5% for each subsequent \$100 billion in market value above \$600 billion.

The market value threshold must be in a new range for 4 consecutive quarterly reviews in order for a new market value cap for the BBB universe to be applied. In such instances, the new market value cap will be applied on the last business day of the fourth consecutive quarter on the review date.

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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
	Securitization	ABS
		CMBS

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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

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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

 $C_{i,t}$ 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

$$\begin{aligned} PI_{i,0} &= 100 \\ PI_{i,t} &= PI_{i,t-1} \times \frac{\sum \left[P_{i,t} \times N_{i,t-1} \right]}{\sum \left[P_{i,t-1} \times N_{i,t-1} \right]} \end{aligned}$$

Total Return Index

The total return index (TRI) is given by

$$\begin{split} TRI_{i,0} &= 100 \\ TRI_{i,t} &= TRI_{i,t-1} \times \frac{\sum \left[(P_{i,t} + A_{i,t} + C_{i,t}) \times N_{i,t-1} \right]}{\sum \left[(P_{i,t-1} + A_{i,t-1}) \times N_{i,t-1} \right]} \end{split}$$

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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 HYBrid 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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