FTSE Canada Convertible Bond Index

v3.4



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Introduction

1. Introduction

1.1 FTSE Canada Convertible Bond Index

- 1.1.1 The FTSE Canada Convertible Bond Index is designed to track the performance of exchange listed convertible bonds denominated in Canadian Dollars (CAD), subject to issuer and industry market value caps.
- 1.2 The FTSE Canada Convertible Bond Index does not take account of ESG factors in its index design.

1.3 IOSCO

1.3.1 FTSE Global Debt Capital Markets Inc. and FTSE Global Debt Capital Markets Limited (together "FTSE Canada") considers that the FTSE Canada Convertible 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 Russell hereby notifies users of the index that it is possible that circumstances, including external events beyond the control of FTSE Russell, 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 benchmark to measure their performance should be able to withstand, or otherwise address the possibility of changes to, or cessation of, the index.
- 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 Russell 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 maintenance of the FTSE Canada Convertible Bond Index. Copies of these Ground Rules are available from FTSE Russell.

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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., 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 the index. A total return index takes into account the price changes and interest accrual and payments of each bond.
- 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 Russell is responsible for the daily calculation, production and operation of the FTSE Canada Convertible Bond Index and will:
 - maintain records of all constituents;
 - make changes to the constituents and their weightings 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 Convertible Bond Index.

2.2 Amendments to these Ground Rules

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.

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¹ 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>

FTSE Russell Index policies

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

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 FTSE Russell Governance Framework

3.4.1 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.

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.

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

Eligibility criteria

4. Eligibility criteria

4.1 Eligible bonds

- 4.1.1 The following criteria are used to determine the eligibility of securities for the FTSE Canada Convertible Bond Index:
 - Securities listed on a Senior Canadian Stock Exchange (Toronto Stock Exchange); and
 - Securities convertible at the discretion of the bond holder into common equity.
- 4.1.2 Securities must be within the following pricing range:
 - Securities pricing in the range of greater than or equal to \$80 and less than or equal to \$120 for seven consecutive business days prior to the Quarterly Selection Date;
 - Securities priced below \$80 or above \$120 for 7 consecutive business days as of Quarterly Selection Date are ineligible for the index;
 - To be considered for re-inclusion, securities excluded due to price level, must have a price greater than
 or equal to \$90, or less than or equal to \$110 for seven consecutive business days prior to the Quarterly
 Selection Date, given they meet other eligibility criteria.
- 4.1.3 Securities must meet the following liquidity thresholds:
 - For securities not issued in the three-month period prior to the Quarterly Selection Date, securities with observed adequate liquidity will be considered;
 - Securities issued in the three-month period prior to the Quarterly Selection Date are not required to meet a minimum liquidity threshold.
- 4.2 Securities that exit the index due to lack of liquidity must meet the liquidity threshold at two (2) consecutive Quarterly Selection Dates to be considered for re-inclusion into the index, given they meet other eligibility criteria

4.3 Minimum issue size

4.3.1 Securities must have a notional size of at least \$50 million in order to be eligible for the index...

4.4 Exclusions

- 4.4.1 The following securities are excluded from the index
 - securities with less than 3 months to maturity from the index rebalance date; or
 - securities that are in default; or
 - securities that are confirmed as scheduled to be called prior to the next index rebalance according to a
 publicly filed corporate action bulletin.

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4.5 Additional restrictions

- 4.5.1 On each rebalance date (as defined in Rule 6.1.1), the following market value weight caps will be applied:
 - Single issuer weights cannot exceed 10% of total market value;
 - Sector weights cannot exceed 50% of total market value

If a market value weight cap is exceeded, the weight of all securities issued by a given issuer or assigned a sector that is above the cap is reduced in proportion to individual security market values.

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Price sources

5. Price sources

5.1 Prices for each security are assigned as the daily Close Price provided by the Toronto Stock Exchange.

If a Bond Price is not available, the most recent closing price is carried forward.

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Periodic review of constituents

6. Periodic review of constituents

6.1 Review date

6.1.1 Index eligibility for the FTSE Canada Convertible Bond Index is reviewed on a quarterly basis on the 7th business day before the last business day of January, April, July, and October (Selection Date). Index changes take effect on the last business day of the quarter (Rebalance Date).

6.2 Review process

6.2.1 The quarterly review is designed to ensure that the FTSE Canada Convertible Bond Index remains representative of the market it is meant to track while minimizing turnover.

6.3 Index weights

6.3.1 Securities are weighted based on market value, subject to capping rules defined in Rule 6.5.

6.4 Capping rules

- 6.4.1 The weight of bonds in the FTSE Canada Convertible Bond Index is capped such that the total market value weight of any single issuer does not exceed 10%, and the total market value weight of any industry sector does not exceed 50%. Any excess market value above the 10% cap for issuers and the 50% cap for sector will result in re-weighting of the remaining constituents proportional to market weight.
- 6.4.2 Capped market values are calculated as of the close of business on each quarterly Selection Date based on the universe of securities that are eligible for the index as of the latest review Capping factors and any constituent changes are effective as of the Rebalance Day.

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Index rebalancing

Index rebalancing

7.1 Additions

New issuance, including reopenings, is considered for inclusion for the index at the Quarterly Selection Date.

7.2 Intra-review deletions

- 7.2.1 Intra-review call events result in a security being removed from the index on the call date at the call price.

 Any removal will result in re-weighting of the remaining constituents proportional to market weight. In the event that a call date is in close proximity to a quarterly index review, FTSE Russell may use its discretion to not include a security for subsequent index rebalancing following advance notice.
- 7.2.2 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 end of day market price recorded for that day. When a bond is delisted from its primary exchange, its removal from the FTSE Canada Convertible Bond Index will be concurrent with the delisting. The last traded price will be reflected when the security exits the index. Any adjustment will result in re-weighting of the remaining constituents proportional to market weight.

7.3 Mandatory exchanges

7.3.1 In the event that anew security is issued to replace an old one, the old security is deleted and the new security is added on the effective date of the exchange, or the next Canadian business day if the effective date is not a business day. The exchanged security exits the index at the last available price. If there is no price available for the new security, the price of the old security will be used to add it to the index. Eligibility rules are not applied to the new security until the next quarterly review. At the next quarterly review, the price history for the securities will be merged, as needed, to evaluate the 7 day price rule.

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Appendix A

Index calculations

Index Formulae

The following notation is used in the return 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} the capped nominal value of a constituent bond i on valuation day t

Ci,t value of any coupon payment received from the bond i for the assumed settlement date at time t.

If none the value = 0

Coupon_i coupon rate of a constituent bond i

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

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

$$C_{t} = \frac{\sum_{i}(P_{i,t} + A_{i,t}) \times N_{i,t} \times Coupon_{i}}{\sum_{i}(P_{i,t} + A_{i,t}) \times N_{i,t}}$$

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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 (Convx) is given by

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

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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 Convertible 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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