Section 1

Introduction

1.0 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).

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](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.](http://www.iosco.org)

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.

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 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 errors or 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 errors or 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.

1.7 **FTSE Russell**


1.8 **Index Construction Methodology**

1.8.1 The FTSE Canada Convertible Bond Index consists of all Canadian convertible bonds publicly traded on the Toronto Stock Exchange that have a minimum notional amount of CAD 50 million subject to liquidity and issue and industry group capping limits, weighted by market value.

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 the index. A total return index takes into account the price changes and interest accrual and payments of each bond.

1.11 The base currency of the benchmark is Canadian Dollars (CAD).
Section 2
Management Responsibilities

2.0 Management Responsibilities

2.1 FTSE International Limited (FTSEI)

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 Product Governance Board before approval is granted.

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).
Section 3

FTSE Russell Index Policies

3.0 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 Indexes document is available from the FTSE Russell website using the link below or by contacting info@ftserussell.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
Section 4

Eligibility Criteria

4.0 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 / equal to $80 and less / equal to $120 for seven consecutive business days prior to selection day;
- Securities priced below $80 or above $120 for 7 consecutive business days as of selection day are ineligible for the index;
- To be considered for re-inclusion, securities excluded due to price level, must have a price greater / equal to $90 or less / equal to $110 for seven consecutive business days prior to the selection day for the next quarterly review, 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 selection date, securities with observed adequate liquidity will be considered;
- For securities issued in the three month period prior to the selection date, no minimum liquidity consideration;

4.2 Securities which become ineligible and are removed from index due to lack of liquidity, must meet the liquidity eligibility for two (2) consecutive quarters in order 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 inclusion to the FTSE Canada Convertible Bond Index.

4.3.2 In order to be eligible for the indexes bonds must have a price assigned from a price source as specified in Section 5 of these Ground Rules.
4.4 **Exclusions**

4.4.1 Securities are ineligible for index inclusion if they are:

- less than 3 months to maturity; or
- in default; or
- confirmed (according to publicly filed corporate action bulletin) as scheduled to be called prior to the next index rebalance.

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 will not to exceed Market Value of 10%
- Industry Sector not to exceed Market Value of 50%

If a Market Value Weight Cap is breached, all securities holdings under the cap are reduced in proportion to their individual market value to meet the cap constraint.
Section 5

Price Sources

5.0 Price Sources

5.1 The price for the valuation of each index constituent (Bond Price) is taken from the daily Close Price as provided by the Toronto Stock Exchange.

If the Bond Price is not available the most recent closing price is carried forward.
Section 6

Periodic Review of Constituents

6.0 Periodic Review of Constituents

6.1 Review Date

6.1.1 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 Responsibilities and Reporting

6.2.1 FTSE will be responsible for conducting the quarterly review of constituents of the FTSE Canada Convertible Bond Index and determining constituents for addition or deletion as part of the quarterly review.

6.3 Review Process

6.3.1 The quarterly review is designed to provide stability in the selection of constituents of the FTSE Canada Convertible Bond Index while ensuring that the indexes continue to be representative of the market.

6.4 Index Weights

6.4.1 Each bond shall be weighted in accordance to Market Value, subject to capping limits below.

6.5 Capping Rules

6.5.1 The objective of the capping in the FTSE Canada Convertible Bond Index is to ensure that the total weight of bonds from any single issuer does not exceed 10%, and to limit the weight of any industry sector to 50%. The issuer and sector level weights are based on market values. If the aggregate weight of an issuer is greater than the maximum weight, its weight will be capped at the maximum weight and the bonds issued by the issuer will be reduced in proportion to market value. The same procedure will apply for the sector capping.

6.5.2 The capping will be based on the indicative constituents at the quarterly review, which incorporates additions/deletions. Prices from the close of business on the selection day before the end of January, April, July, and October will be used. The capping factors will be effective on the rebalance day.
Section 7

Changes to Constituent Bonds

7.0 Changes to Constituent Bonds

7.1 Intra-Review Additions

New issuance and additions will be included in the index at the next review date if the issue meets the eligibility criteria.

7.2 Intra-Review Deletions

7.2.1 Call events on any constituent bond will result in the issue being removed from the index on the call date at the call price. Any removal will result in re-weighting of the remaining constituents. In the event of the call date being in close proximity to an index review, FTSE may use its discretion to remove it from the index at the index review date following advance notice.

7.2.2 Partial calls or other reduction in shares outstanding, will 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 removal will be effected at the last traded price and the index divisor will adjust accordingly.

7.3 Mandatory Exchange

7.3.1 In this case a new 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 old security is deleted 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 review. At the next review the price histories of the old and new securities will be merged if needed to evaluate the 7 day price rule.
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
- \( C_{i,t} \) value of any coupon payment received from the bond i for the assumed settlement date at time t. If none the value = 0
- \( \text{Coupon}_i \) coupon rate of a constituent bond i
- \( y_{i,t} \) yield to maturity of a constituent bond i as of valuation day t
- \( \text{MacDur}_{i,t} \) Macaulay duration of a constituent bond i as of valuation day t
- \( \text{ModDur}_{i,t} \) Modified duration of a constituent bond i as of valuation day t
- \( \text{Dval01}_{i,t} \) Dollar duration of a constituent bond i as of valuation day t
- \( \text{Convexity}_{i,t} \) Convexity of a constituent bond i as of valuation day t

Clean Price Index (Capital Index)
The clean price (\( P_I \)) or capital index is given by

\[
P_{I,0} = 100 \\
\frac{\sum_i P_{i,t} \times N_{i,t-1}}{\sum_i P_{i,t-1} \times N_{i,t-1}}
\]

Total Return Index
The total return index (\( TRI \)) is given by

\[
TRI_{I,0} = 100 \\
\frac{\sum_i (P_{i,t} + A_{i,t} + C_{i,t}) \times N_{i,t-1}}{\sum_i (P_{i,t-1} + A_{i,t-1}) \times N_{i,t-1}}
\]
Average Coupon
The index level average coupon ($C_t$) is given by
$$C_t = \frac{\sum_i (P_{i,t} + A_{i,t}) \times N_{i,t} \times \text{Coupon}_i}{\sum_i (P_{i,t} + A_{i,t}) \times N_{i,t}}$$

Average Yield to Maturity
The index level average yield to maturity ($Y_t$) 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 ($D_t$) is given by
$$D_t = \frac{\sum_i (P_{i,t} + A_{i,t}) \times N_{i,t} \times \text{MacDur}_{i,t}}{\sum_i (P_{i,t} + A_{i,t}) \times N_{i,t}}$$

Average Modified Duration
The index level average Modified duration ($MD_t$) is given by
$$MD_t = \frac{\sum_i (P_{i,t} + A_{i,t}) \times N_{i,t} \times \text{ModDur}_{i,t}}{\sum_i (P_{i,t} + A_{i,t}) \times N_{i,t}}$$

Average Value of 01
The index level average value of Dval01 ($DV01_t$) is given by
$$DV01_t = \frac{\sum_i (P_{i,t} + A_{i,t}) \times N_{i,t} \times \text{Dval01}_{i,t}}{\sum_i (P_{i,t} + A_{i,t}) \times N_{i,t}}$$

Average Convexity
The index level average convexity ($Convx_t$) is given by
$$Convx_t = \frac{\sum_i (P_{i,t} + A_{i,t}) \times N_{i,t} \times \text{Convexity}_{i,t}}{\sum_i (P_{i,t} + A_{i,t}) \times N_{i,t}}$$
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.ftserussell.com or e-mail info@ftserussell.com. Contact details can also be found on this website.