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Section 1
Introduction

1.0 Introduction

1.1 The FTSE Canada 1-3 Year Laddered Floating Rate Note Index

1.1.1 FTSE International Limited (FTSE) considers that the FTSE Canada 1-3 Year Laddered Floating Rate Note Index (the Index) meets the IOSCO Principles for Financial Benchmarks as published in July 2013.

1.2 The FTSE Canada 1-3 Year Laddered Floating Rate Note Index does not take account of ESG factors in its index design.

1.2.1 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.

1.2.2 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 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

1.3 These Ground Rules

1.3.1 This document sets out the Ground Rules for the construction and management of the FTSE Canada 1-3 Year Laddered Floating Rate Note Index.

1.4 FTSE Russell

1.5 Index Objectives

1.5.1 The FTSE Canada 1-3 Year Laddered Floating Rate Note Index measures the return of a 1-3 year Floating Rate Note Ladder in Government Notes (rated A or higher). Selected securities are placed into three maturity buckets. Maturity buckets are 1-1.99 years, 2-2.99 years, and 3-3.99 years. The Index was created as of December 31, 2013 with equal weights for each security in each respective maturity bucket.

1.6 Credit Ratings

1.6.1 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. As well, 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

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

1.7 Capital Index (also known as the Price Index or the Clean Price Index)

1.7.1 The Capital Index tracks the notional weighted average change in the prices of the Index constituents and is calculated every business day.

1.8 Total Return Index (also known as the Performance Index)

1.8.1 The Total Return Index takes into account the price changes and interest accrual and payments of each Index constituent.

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

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)
Section 2

Management Responsibilities

2.0 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 1-3 Year Laddered Floating Rate Note 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 1-3 Year Laddered Floating Rate Note 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 indexes.

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](http://example.com)

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 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).
As provided for in the Statement of Principles for FTSE Fixed Income Indexes, 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 Ground Rules should subsequently be updated to provide greater clarity.
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 Guide to the Calculation Methods for the FTSE Fixed Income Indexes

3.2.1 For a description of the methodology used to calculate the index and bond level analytics, please consult the Guide to Calculation Methods for FTSE Fixed Income indexes, which can be found using the following link:

FTSE_Fixed_Income_Index_Guide_to_Calculation.pdf

3.3 Statement of Principles for FTSE Fixed Income Indexes (the Statement of Principles)

Indexes need to keep abreast of changing markets and the Ground Rules cannot anticipate every eventuality. Where the 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 Indexes 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 Product Governance Board.

The Statement of Principles for Fixed Income Indexes can be accessed using the following link:


3.4 Price Sources

3.4.1 For further information, please see the FTSE Canada Multi Dealer Pricing Methodology Guide which can be accessed using the following link:

FTSE_Canada_Multi_Dealer_Pricing_Methodology_Guide.pdf
3.5 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

3.6 Policy for Benchmark Methodology Changes

3.6.1 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 Securities

4.1.1 The FTSE Canada 1-3 Year Laddered Floating Rate Note Index consists of Floating Rate Notes issued by the Government of Canada, Agencies, and Provinces, rated A, or higher. Eligible securities are all constituents of the FTSE Canada Floating Rate Note Index at the time they are added to the Index.

4.1.2 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.

4.2 Minimum Issue Size

The following minimum issue size applies:

FTSE Canada 1-3 Year Laddered Floating Rate Note Index

$1 Billion

4.3 Minimum Rating

The FTSE Canada 1-3 Year Laddered Floating Rate Note Index consists of Floating Rate Notes rated as single “A” or higher. The Index rating is derived from the ratings provided by S&P, Moody’s and DBRS as outlined in Rule 1.5
Section 5

Price Sources

5.0 Price Sources

5.1 The securities are priced using inputs from leading fixed income broker/dealers in Canada at 4:00pm Eastern Time. Normal settlement rules apply (e.g. 2 day settlement for Canada bonds under three years to maturity, 3 day settlement for most other bonds) and the derived single quote per issue, or data, (Multi Dealer quote) is devised using proprietary filters that first remove any severe outliers, followed by a Standard Deviation Mean calculation. This Multi Dealer data best represents the marketplace by removing the ability of any one dealer to have undue influence upon the final calculated price/yield. The Index is constructed using mid-market prices.

Valuation at the 4:00pm close is based on the trader's judgment of where a security should be priced, taking into account such factors as where the security previously traded, liquidity, and any market-wide as well as security-specific developments that can be expected to affect the price. This policy is intended to reflect changing market conditions, even in cases where a security may not frequently trade.

For securities that trade actively, the closing price will generally be close to where the security last traded, if not the same. For securities that trade less frequently, however, there could be a larger difference between the closing price and the price where the security last traded. Consider the extreme case of a security that trades in the morning, is subsequently and unexpectedly downgraded, and does not trade for the rest of the day. When setting the 4:00pm price, it is more accurate and conservative for the trader to reflect the expected impact of the credit rating downgrade, rather than simply rely on the latest available transaction.

For further information, please see the FTSE Canada Multi Dealer Pricing Methodology Guide which can be accessed using the following link:

FTSE_Canada_Multi_Dealer_Pricing_Methodology_Guide.pdf
Section 6

Periodic Changes to the Portfolios

6.0 Periodic Changes to the Portfolios

6.1 Rebalancing the Indexes

6.1.1 The FTSE Canada 1-3 Year Laddered Floating Rate Note Index is reviewed annually on 30 June using price data as of 15 June.

6.2 Rolling Buckets

Floating Rate Notes roll out to the next lower bucket on the review date. Floating Rate Notes 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. The securities selected for reinvestment into the longest bucket will have equal market value assignments as of the day of the rebalance.

6.3 Addition of Constituents

6.3.1 On the Index inception date, each of the three maturity buckets will be populated with a maximum of 20 eligible floating rate notes. These notes will be weighted equally. On every subsequent annual rebalancing, only the longest maturity bucket (3-3.99 year) will be re-populated. The process by which the 20 securities are selected is described below.

6.3.2 During the selection process, all the securities in each bucket are ranked in descending order of maturity. The securities with the longest maturities are selected in order, until all the eligible securities have been selected, or the maximum of 20 securities has been selected.

6.4 Removal of Constituents

6.4.1 Floating Rate Notes are removed from the Index at the annual rebalance when their remaining effective term to maturity has declined to under one calendar year, whether that year has 365 or 366 days. In the case that any constituent bond is downgraded below the minimum rating for the Index, it will be removed on the first day of the following month. In the case that a constituent bond is called, it will be removed from the Index on the call date. Any removal will result in re-weighting of the remaining constituents.
Appendix A: Index Calculations

For further details on the index and bond level calculations, please see the Guide to Calculation Methods for the FTSE Fixed Income Indexes which can be accessed using the following link:

FTSE_Fixed_Income_Index_Guide_to_Calculation.pdf

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 $t$
- $\text{Coupon}_i$: 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 $t$
- $C_{i,t}$: 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

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 1-3 Year Laddered Floating Rate Note Index Ground Rules please visit www.ftserussell.com or e-mail info@ftserussell.com. Contact details can also be found on this website.