FTSE Low Beta Equal Weight Index Series
v1.9
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Section 1

Introduction

1.0 Introduction

1.1 This document sets out the Ground Rules for the construction and management of the FTSE Low Beta Equal Weight Index Series calculated by FTSE Russell.

1.2 The FTSE Low Beta Equal Weight Index Series has been designed to reflect the performance of securities exhibiting relatively low beta, where all index constituents are weighted equally.

1.3 The FTSE Low Beta Equal Weight Index Series does not take account of ESG factors in its index design.

1.4 The FTSE Low Beta Equal Weight Index Series consists of the following indexes:

<table>
<thead>
<tr>
<th>FTSE Low Beta Equal Weight Index</th>
<th>Underlying Universe</th>
<th>Base Currency</th>
</tr>
</thead>
<tbody>
<tr>
<td>Russell 1000 Low Beta Equal Weight Index</td>
<td>Russell 1000 Index</td>
<td>USD</td>
</tr>
<tr>
<td>FTSE Developed ex US Low Beta Equal Weight Index</td>
<td>FTSE Developed ex US Index</td>
<td>USD</td>
</tr>
</tbody>
</table>

1.5 These Ground Rules should be read in conjunction with the relevant underlying index Ground Rules which are available at www.ftserussell.com.

1.6 A Price Index, Total Return Index and Net of Tax Index will be calculated on a real time basis.

The Total Return indexes include income based on ex dividend adjustments. All dividends are applied as declared.

The Net of Tax Total Return Index is calculated based on the maximum withholding tax rates applicable to dividends received by institutional investors who are not resident in the same country as the remitting company and who do not benefit from double taxation treaties.

1.7 FTSE Russell

1.8 Index Objective and Intended Use

1.8.1 The indexes and index statistics are intended to reflect the investment markets included in the index definitions and to facilitate the detailed analysis of such markets.

1.8.2 FTSE Russell hereby notifies users of the index series 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 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.

1.8.3 Index users who choose to follow this index series or to buy products that claim to follow this index series 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 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.

1.9 These Ground Rules

1.9.1 This document sets out the Ground Rules for the construction and maintenance of the FTSE Low Beta Equal Weight Index Series.
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 series.¹

2.1.2 FTSE is responsible for the daily calculation, production and operation of the FTSE Low Beta Equal Weight Index Series and will:

- maintain records of the index weightings of all constituents;
- make changes to the constituents and their weightings in accordance with the Ground Rules;
- carry out the periodic index reviews of the index and apply the changes resulting from the reviews as required by the Ground Rules;
- publish changes to the constituent weightings resulting from their ongoing maintenance and the periodic review;
- disseminate the indexes.

2.2 Amendments to these Ground Rules

2.2.1 These Ground Rules shall be subject to regular review by FTSE Russell to ensure that they continue to best reflect the aims of the index series. 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.

2.2.2 As provided for in the Statement of Principles for FTSE Russell Equity 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.

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 FTSE Global Equity Index Guide to Calculation Methods

3.1.1 The aim of the guide is to describe how the indexes are calculated, to facilitate users replicated of the indexes in order to support their investment and trading activities and to assist users in understanding the factors which influence the performance of the indexes.

FTSE_Global_Equity_Index_Series_Guide_to_Calc.pdf

3.2 Corporate Actions and Events Guide

3.3 Full details of changes to constituent companies due to corporate actions and events can be accessed in the Corporate Actions and Events Guide for Non Market Cap Weighted Indexes using the following link:

Corporate_Actions_and_Events_Guide_for_Non_Market_Cap_Weighted_Indices.pdf

3.4 Statement of Principles for FTSE Russell Equity Indexes (the Statement of Principles)

Indexes 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 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 can be accessed using the following link:


3.5 Queries and Complaints

FTSE Russell’s complaints procedure can be accessed using the following link:

Benchmark_Determination_Complaints_Handling_Policy.pdf
3.6 Index Policy for Trading Halts and Market Closures

3.6.1 Guidance for the treatment of index changes in the event of trading halts or market closures can be found using the following link:

Index_Policy_for_Trading_Halts_and_Market_Closures.pdf

3.7 Index Policy in the Event Clients are Unable to Trade a Market

3.7.1 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.pdf

3.8 Recalculation Policy and Guidelines

3.8.1 The FTSE Low Beta Equal Weight Index Series are recalculated whenever errors or distortions occur that are deemed to be significant. Users of the FTSE Low Beta Equal Weight Index Series are notified through appropriate media.

For further information refer to the FTSE Russell Recalculation Policy and Guidelines document which is available from the FTSE Russell website using the link below or by contacting info@ftserussell.com.

Recalculation_Policy_and_Guidelines_Equity_Indexes.pdf

3.9 Policy for Benchmark Methodology Changes

3.9.1 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

Eligible Securities

4.0 Eligible Securities

4.1 All securities in the underlying universes detailed in Rule 1.4 will be considered for inclusion. For information regarding eligibility of securities within the underlying universes, please see the FTSE Global Equity Index Series Ground Rules and Russell U.S. Indexes methodology that can be found at www.ftserussell.com.

4.2 Selection Criteria

4.2.1 Beta Screen

Stock beta is defined as: \( \beta_s = \frac{\text{Covariance}(r_s, r_c)}{\text{Variance}(r_c)} \),

where:

- \( \text{Covariance}(r_s, r_c) = \frac{1}{n-1} \sum_{i=1}^{n} (r_s - \bar{r}_s)(r_c - \bar{r}_c) \) where \( n = 18 \),

- \( \text{Variance}(r_c) = \frac{1}{n-1} \sum_{i=1}^{n} (r_c - \bar{r}_c)^2 \), where \( n=18 \)

- \( r_s \) = monthly total return of security \( s \) in local currency.

- \( \bar{r}_s \) = is the average monthly total return of security \( s \) in local currency over 18 months.

- \( r_c \) = monthly total return of the underlying country index drawn from the FTSE All-World Index (Developed ex US) or the Russell 1000 Index for US stocks in the same currency as security \( s \).

- \( \bar{r}_c \) = is the average monthly total return of the underlying country index, \( r_c \), over 18 months.

Stocks with a beta < 1 are eligible for inclusion.

Stocks with less than 18 months history are not eligible for inclusion.

4.2.2 Earnings Screen

Stocks with trailing 12 month earnings > 0 are eligible for inclusion. Earnings is net income before the deduction of preferred dividends and is sourced from a third party data provider.

4.2.3 Stocks must satisfy Rules 4.2.1 and 4.2.2 to be eligible for inclusion.
Section 5

Periodic Review of Constituents

5.0 Periodic Review of Constituents

5.1 The FTSE Low Beta Equal Weight Index Series will be reviewed semi-annually. The Russell 1000 Low Beta Equal Weight Index will be reviewed in June and December based on data as at the close of business on the last trading day of May and November. The FTSE Developed ex US Low Beta Equal Weight Index will be reviewed in March and September based on data as at the close of business on the last trading day of February and August.

5.2 The review will be implemented after the close of business on the third Friday (i.e. effective on the subsequent business day) of the review month, with the exception of Russell 1000 Low Beta Equal Weight Index review in June (see Rule 5.2.1).

5.2.1 Changes arising from the June review are announced seven trading days prior to the implementation of the Russell 1000 Low Beta Equal Weight Index review. The review will be implemented on the same date as the Russell 1000 annual reconstitution. For details of the implementation dates of the Russell 1000, please refer to the Russell U.S. Equity Indexes Construction and Methodology available at Russell-US.

5.3 Rules at the Periodic Review

5.3.1 All stocks in the underlying universe which pass the screens outlined in Section 4.0 will be selected for inclusion in the FTSE Low Beta Equal Weight Index.

5.4 Index Weighting

5.4.1 Each FTSE Low Beta Equal Weighted Index will be equally weighted by company at each semi-annual review. For companies comprised of multiple security lines, a company’s weight will be distributed across each eligible line in proportion to investable market capitalisation. The calculation of the constituent weighting factors will be based on security prices taken on the Wednesday before the first Friday of a review month. The weighting procedure is applied to the FTSE Low Beta Equal Weight Index Series after the close of business on the review implementation date and will be effective at the start of business on the subsequent business day.

5.5 Index Back-Histories

5.5.1 In order to simulate the availability of Earnings data prior to the January 2016 launch date of the FTSE Low Beta Equal Weight Indexes, all index reviews prior to this date employ a 3 month lag on reported fundamental data.
Section 6

Changes to Constituent Companies

6.0 Changes to Constituent Companies

6.1 Intra-review Additions

6.1.1 The FTSE Low Beta Equal Weight Index Series will not accept intra-review additions. Additions to a FTSE Low Beta Equal Weight Index Series will be considered for inclusion at the next semi-annual review.

6.2 Intra-review Deletions

6.2.1 A constituent will be removed from the FTSE Low Beta Equal Weight Index Series if it is also removed from its corresponding underlying index as shown below and its weight will be distributed pro-rata among the remaining constituents in the relevant FTSE Low Beta Equal Weight Index.

<table>
<thead>
<tr>
<th>FTSE Low Beta Equal Weight Index</th>
<th>Underlying Universe</th>
<th>Deletion</th>
</tr>
</thead>
<tbody>
<tr>
<td>Russell 1000 Low Beta Equal Weight Index</td>
<td>Russell 1000 Index</td>
<td>Minimum 2 day notice</td>
</tr>
<tr>
<td>FTSE Developed ex US Low Beta Equal Weight Index</td>
<td>FTSE Developed ex US Index</td>
<td>Concurrent with deletion from underlying index</td>
</tr>
</tbody>
</table>
Section 7

Corporate Actions and Events

7.0 Corporate Actions and Events

7.1 If a constituent in a FTSE Low Beta Equal Weight Index Series has a stock split, stock consolidation, rights issue, bonus issue, a change in the number of shares in issue or a change in free float, the constituent's weighting in the FTSE Low Beta Equally Weighted Index remains unchanged pre and post such an event.

7.2 Full details of changes to constituent companies due to corporate actions and events can be accessed in the Corporate Actions and Events Guide for Non Market Cap Weighted Indexes using the following link: Corporate_Actions_and_Events_Guide_for_Non_Market_Cap_Weighted_Indexes.pdf

A Corporate ‘Action’ is an action on shareholders with a prescribed ex date. The share price will be subject to an adjustment on the ex date. These include the following:

- Capital Repayments
- Rights Issues/Entitlement Offers
- Stock Conversion
- Splits (sub-division) / Reverse splits (consolidation)
- Scrip issues (Capitalisation or Bonus Issue)

A Corporate ‘Event’ is a reaction to company news (event) that may impact the index depending on the index rules. For example, a company announces a strategic shareholder is offering to sell their shares (secondary share offer) – this could result in a free float weighting change in the index. Where an index adjustment is required FTSE Russell will provide notice advising of the timing of the change.

7.3 Suspension of Dealing

Suspension of Dealing rules can be found within the Corporate Actions and Events Guide for Non Market Cap Weighted Indexes using the link above.

7.4 Takeovers, Mergers and Demergers

The treatment of takeovers, mergers and demergers can be found within the Corporate Actions and Events Guide for Non Market Cap Weighted Indexes using the link above.
Section 8

Index Calculation

8.0 Index Calculation

8.1 Calculation Frequency

8.1.1 The FTSE Low Beta Equal Weight Index Series use actual closing mid-market or last trade prices, where available, for securities with local stock exchange quotations.

8.2 Index Calculation

8.2.1 The FTSE Low Beta Equal Weight Index Series will be displayed to eight decimal points.

8.2.2 The FTSE Low Beta Equal Weight Index Series is calculated using the following formula:

$$ \sum_{i=1}^{N} \left( \frac{p_i \times e_i \times s_i \times f_i \times c_i}{d} \right) $$

Where,
- \( i=1,2,\ldots,N \)
- \( N \) is the number of securities in the index.
- \( p_i \) is the latest trade price of the component security (or the price at the close of the index on the previous day).
- \( e_i \) is the exchange rate required to convert the security’s currency into the index’s base currency.
- \( s_i \) is the number of shares in issue used by FTSE Russell for the security, as defined in these Ground Rules.
- \( f_i \) is the Investability Weighting Factor to be applied to a security to allow amendments to its weighting, expressed as a number between 0 and 1, where 1 represents a 100% free float. This factor is published by FTSE Russell for each security in the underlying index.
- \( c_i \) is the Weighting Factor to be applied to a security to correctly weight that security in the index. This factor maps the investable market capitalisation of each stock to a notional market capitalisation for inclusion in the index.
- \( d \) is the divisor, a figure that represents the total issued share capital of the index at the base date. The divisor can be adjusted to allow changes in the issued share capital of individual securities to be made without distorting the index.
# Appendix A: Index Opening and Closing Hours

<table>
<thead>
<tr>
<th>Index</th>
<th>Open</th>
<th>Close</th>
</tr>
</thead>
<tbody>
<tr>
<td>Russell 1000 Low Beta Equal Weight Index</td>
<td>9:30</td>
<td>16:10</td>
</tr>
</tbody>
</table>

Monday to Friday

Notes:

i) Closing prices are downloaded from Thomson Reuters at 16:30. Since the New York Stock Exchange, NYSE Arca and NASDAQ do not release official closing prices until several hours later, the price used in the index may not match this official close. If the downloaded closing price is subsequently overwritten by the official closing price, the downloaded closing price is retained in the index calculation.

ii) The indexes will be calculated during official market hours of the New York Stock Exchange, NYSE Arca and NASDAQ and will be closed on US holidays.

iii) Timings are based on Eastern Standard Time (EST).

| FTSE Developed ex US Low Beta Equal Weight Index (Net Tax) (EST) | 19:30 | 16:10 |
Appendix B: Status of Index

A Price Index, Total Return Index and Net of Tax Index will be calculated on a real-time basis in US Dollars. The FTSE Low Beta Equal Weight Index Series may exist in the following states.

A) Firm

The Index is being calculated during Official Market Hours (see Appendix A). No message will be displayed against the index value.

B) Closed

The Index has ceased all calculations for the day. The message 'CLOSE' will be displayed against the index value calculated by FTSE Russell.

C) Held

During Official Market Hours, an Index has exceeded pre-set operating parameters and the calculation has been suspended pending resolution of the problem. The message 'HELD' will be displayed against the last Index value calculated by FTSE Russell.

D) Indicative

If there is a system problem or situation in the market that is judged to affect the quality of the constituent prices at any time when the Index is being calculated, the Index will be declared indicative (e.g. normally where a ‘fast market’ exists in the equity market). The message 'IND' will be displayed against the Index value calculated by FTSE Russell.

The official opening and closing hours of the FTSE Low Beta Equal Weight Index Series are set out in Appendix A. Variations to the official hours of the Index will be published by FTSE Russell.
Appendix C: Further Information

A Glossary of Terms used in FTSE Russell’s Ground Rule documents can be found using the following link: Glossary.pdf

Further information on the FTSE Low Beta Equal Weight Index Series is available from FTSE Russell. For contact details please visit the FTSE Russell website or contact FTSE Russell client services at info@ftserussell.com.

Website: www.ftserussell.com


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