Ground Rules

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FTSE Synthetic Index Series

v2.0



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Section 1 Introduction

1. Introduction

- 1.1.1 The FTSE Synthetic Index Series is designed to reflect the total return (including income from interest) or excess return (excluding income from interest) performance of the first nearby futures contracts.
- 1.1.2 The FTSE Synthetic Index Series operates in accordance with a pre-determined rolling methodology, and FTSE Russell does not exercise any discretion with respect to the index.

1.2 FTSE Synthetic Index starting value

- 1.2.1 Indices in the FTSE Synthetic Index Series have a starting value of 100 on the initial calculation date of the index.
- 1.3 The FTSE Synthetic Index Series does not take account of ESG factors in its index design.

1.4 Daily index value

- 1.4.1 Indices in the FTSE Synthetic Index Series are denominated in currency of the futures contract used and are calculated on each day on which the relevant exchange is open for trading. The index value of an index in the FTSE Synthetic Index Series on any given index business day will be calculated as the *product* of:
 - i. the value of the FTSE Synthetic Index as of the preceding business day, and
 - ii. the *sum* of the daily return of the of the futures contract and the overnight interest rate for the calculation period.

1.5 Daily return of the equity futures contracts

1.5.1 On any business day (other than during the roll period), the daily return of a futures contract is calculated as the official daily settlement price of the futures, contract quoted by the exchange divided by the settlement price on the preceding business day.

During the roll period, the calculation of the daily return of a FTSE Synthetic Index will reflect the price of the second nearby futures contract into which the first nearby futures contract is gradually rolled.

1.6 Overnight interest rate

1.6.1 The interest rate calculation uses the available overnight interest rate of the futures currency and an ACT/365 (fixed) day count fraction convention.

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, FTSE (Beijing) Consulting Limited, Refinitiv Benchmark Services (UK) Limited, Refinitiv Limited and Beyond Ratings.

1.7.1 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 should be able to withstand, or otherwise address the possibility of changes to, or cessation of, the index series.

- 1.7.2 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 (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.

Section 2 Management responsibilities

2. Management responsibilities

2.1 FTSE International Limited (FTSE)

- 2.1.1 FTSE is the benchmark administrator of the index¹.
- 2.1.2 FTSE is responsible for the daily calculation, production and operation of the index 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 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 reviews;
 - disseminate the index series.
- 2.1.3 These Ground Rules set out the methodology and provide information about the publication of FTSE Synthetic Index Series.

2.2 Amendments to these Ground Rules

- 2.2.1 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 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 Index Governance Board before approval is granted.
- 2.2.2 As provided for in the statement of principles for FTSE Russell Equity 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 Ground Rules should subsequently be updated to provide greater clarity.

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</u> 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</u> <u>Benchmarks (Amendment and Transitional Provision) (EU Exit) Regulations 2019</u> (the UK Benchmark Regulation).

Section 3 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 through the links below:

3.1 Statement of Principles for FTSE Russell Equity Indices (the Statement of Principles)

3.1.1 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 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 can be accessed through the following link:

Statement_of_Principles.pdf

3.2 Queries and Complaints

3.2.1 FTSE Russell's complaints procedure can be accessed through the following link:

Benchmark_Determination_Complaints_Handling_Policy.pdf

- 3.3 Index Policy for Trading Halts and Market Closures
- 3.3.1 Guidance for the treatment of index changes in the event of trading halts or market closures can be found through the following link:

Index_Policy_for_Trading_Halts_and_Market_Closures.pdf

3.4 Index Policy in the Event Clients are Unable to Trade a Market or a Security

3.4.1 Details of FTSE Russell's treatment can be accessed through the following link:

Index_Policy_in_the_Event_Clients_are_Unable_to_Trade_a_Market_or_a_Security.pdf

3.5 Recalculation Policy and Guidelines

3.5.1 Where an inaccuracy is identified, FTSE Russell will follow the steps set out in the FTSE Russell Index Recalculation Guidelines when determining whether an index or index series should be recalculated and/or associated data products reissued. Users of the FTSE Synthetic Index Series will be 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 through the link below or by contacting <u>info@ftserussell.com</u>.

Recalculation Policy and Guidelines Equity Indices.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 through the following link:

Policy_for_Benchmark_Methodology_Changes.pdf

3.7 FTSE Russell Governance Framework

3.7.1 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 through the following link:

FTSE_Russell_Governance_Framework.pdf

3.8 Real Time Status Definitions

3.8.1 For indices which are calculated in real time, please refer to the following guide for details of real time status definitions:

Real_Time_Status_Definitions.pdf

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.

⁴ The Benchmarks (Amendment and Transitional Provision) (EU Exit) Regulations 2019 (the UK Benchmark Regulation).

Section 4 Available FTSE synthetic indices

4. Available indices

4.1 The following FTSE Synthetic Indices are available:

| Index | Eligible instrument | Delivery months traded | Overnight interest rate | Return type | Base Currency |
|---|---------------------------------|------------------------|-------------------------|---------------|------------------|
| FTSE 100 Synthetic Index | FTSE 100 Index Future | H,M,U,Z | SONIA | Total return | GBP |
| FTSE 100 Synthetic Excess Return Index | FTSE 100 Index Future | H,M,U,Z | n.a. | Excess return | GBP |
| FTSE MIB Synthetic Index | FTSE MIB Index Future | H,M,U,Z | €STR | Total return | EUR |
| FTSE MIB Synthetic Excess Return Index | FTSE MIB Index Future | H,M,U,Z | n.a. | Excess return | EUR |
| FTSE/JSE Top 40 Synthetic Index | FTSE'JSE Top 40 Index Future | H,M,U,Z | SABOR | Total Return | ZAR |
| FTSE/JSE Top 40 Synthetic Excess Return Index | FTSE'JSE Top 40 Index Future | H,M,U,Z | n.a. | Excess Return | ZAR |

Section 5 Roll methodology

5. Roll methodology

- 5.1.1 Futures contracts expire on their last trade date. When the first nearby futures contract approaches expiration, they are replaced by the second nearby futures contract. This process is referred to as "rolling".
- 5.1.2 **Roll period:** Rolling is conducted over three business days and commences five business days prior to the last trade date of the first nearby futures contract. For example, if the last trade date of the first nearby future is on the 3rd Friday of the month, the Roll Period will commence on the 2nd Friday of the month, 5 business days before. This is referred to as the "roll period".
- 5.1.3 **Futures contract weights during roll period:** On each business day of the roll period, a proportion of the index weight in the first nearby futures contract is rolled into the second nearby futures contract at the daily settlement price of the respective futures contracts. The closing weights on each day in the roll period are detailed in the following table:

| | Weights (at close) | | | |
|----------|-------------------------------|--------------------------------|--|--|
| Roll day | First nearby futures contract | Second nearby futures contract | | |
| 1 | 2/3 | 1/3 | | |
| 2 | 1/3 | 2/3 | | |
| 3 | 0 | 1 | | |

5.2 Price of futures contracts unavailable

- 5.2.1 **Unavailable outside of the roll period:** If, on any business day that does not fall within the roll period, the futures contract settlement price is not published or is otherwise unavailable, then the last available futures contract settlement price is used to calculate the FTSE Synthetic Index.
- 5.2.2 **Unavailable during the roll period:** If the futures contract settlement price is not published or is otherwise unavailable at any time during the roll period, rolling will continue on subsequent roll days without amendment, as detailed in Rule 5.1.3. For example, if on the second roll day no prices are available, the roll will proceed on the third roll day (provided prices are available) using the weights listed for roll day 3.

On any given business day during the roll period when no rolling occurs (a "no-roll business day"), FTSE Russell will not calculate a value for the FTSE Synthetic Index, but will publish the last available value.

Section 6 Calculation formulae

6. Calculation formulae

- 6.1.1 The calculation of indices in the FTSE Synthetic Index Series uses the following formulae. Note these formulae do not reflect the alternative rolling and calculation methodologies applied when the value of a futures contract is not published or is otherwise unavailable (described in Rule 5.2).
 - 1. For total return indices:

$$TRI_t = \left(r_t + \frac{i_{t-n}}{365} \times n\right) \times TRI_{t-n}$$

2. For excess return indices:

$$ERI_t = r_t \times ERI_{t-n}$$

Where

$$r_t = \begin{cases} \frac{cP_{1,t}}{cP_{1,t-n}} \text{ when NOT in the roll period} \\ \left(1 - \frac{m-1}{3}\right) \times \frac{cP_{1,t}}{cP_{1,t-n}} + \frac{m-1}{3} \times \frac{cP_{2,t}}{cP_{2,t-n}} \text{ when on the } m^{th} \text{ day of the roll period, } m = 1,2,3 \end{cases}$$

Where,

t = The calculation business day;

 i_{t-n} = Overnight interest rate as of (t – n);

n = The number of actual calendar days between t and the immediately preceding business day (t – n);

 r_t = One plus the daily price return of the value of the futures contracts on t;

 $_{c}P_{1,t}$ = Futures contract settlement price of the first nearby futures contract on t;

 $_{c}P_{2,t}$ = Futures contract settlement price of the second nearby futures contract on t.

Appendix A Further information

A glossary of terms used in FTSE Russell's Ground Rule documents can be found through the following link: <u>Glossary.pdf</u>

Further information on the FTSE Synthetic 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.lseg.com/en/ftse-russell/

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