Ground Rules

July 2024

FTSE 100 Gross 10% Volatility Target Excess Return Index

FTSE RUSSELL
An LSEG Business

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Contents

Section 1 Introduction 3
Section 2 Management responsibilities 4
Section 3 FTSE Russell Index policies 5
Section 4 Target risk exposure and return on cash 7
Section 5 Calculation of index 9
Appendix A Headline Index details 10
Appendix B Other calculation details 11
Appendix C Further information 12

Section 1
Introduction

1. Introduction

1.1 This document sets out the Ground Rules for the construction and management of the FTSE 100 Gross 10% Volatility Target Excess Return Index. Copies of the Ground Rules are available from FTSE Russell.

1.2 The FTSE 100 Gross 10% Volatility Target Excess Return Index represents the performance of an investment strategy that seeks to manage expected volatility close to a specific targeted level.

1.3 The FTSE 100 Gross 10% Volatility Target Excess Return Index deleverages (leverages) i.e. decreases (increases) the allocation to the underlying equity index and increases (decreases) exposure to a risk-free cash return component, as the volatility of the underlying index increases (decreases), in order to target a pre-specified level of volatility. The index also includes a cash return component.

1.4 The base currency of the index is GBP. Index values may also be published in other currencies.

1.5 For more information on the underlying index, please refer to the relevant FTSE Russell Ground Rules at https://www.lseg.com/en/ftse-russell.

1.6 The FTSE 100 Gross 10% Volatility Target Excess Return Index does not take account of ESG factors in its index design.

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.

1.8 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.

1.9 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 series' 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 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 series or any constituent data.

1.10 This index is published at the end of each working day.

Section 2

Management responsibilities

2. Management responsibilities

2.1 FTSE International Limited (FTSE)

2.1.1 FTSE is the benchmark administrator of the index[1].

2.1.2 FTSE will maintain records and disseminate the index.

2.1.3 MerQube is the calculation agent of the index as defined by the IOSCO Principles and is responsible for its daily calculation.

2.2 Status of these Ground Rules

2.2.1 These Ground Rules set out the methodology and provide information about the publication of the FTSE 100 Gross 10% Volatility Target Excess Return Index.

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 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.

2.3.2 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.

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

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 Appeals

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.

For further information, please 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 info@ftserussell.com.

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 Benchmarks[2], the European benchmark regulation[3] and the UK benchmark regulation[4]. 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 Please refer to the following guide for details of real time status definitions for indices which are calculated in real time.

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.

Section 4

Target risk exposure and return on cash

4. Target risk exposure and return on cash

4.1 Target risk exposure

4.1.1 The FTSE 100 Gross 10% Volatility Target Excess Return Index controls the risk exposure to the underlying index from the volatility of that index.

4.1.2 On any business day *t*, the target level of risk exposure of the underlying index is calculated as:

$$\mathrm{E(t)}=\begin{cases} \min\left(\mathrm{L_M}, \dfrac{\alpha_T}{V_{t-lag}}\right) & if \quad Abs\left[1-\dfrac{\mathrm{E(t\text{-}1)}}{\min\left(\mathrm{L_M}, \dfrac{\alpha_T}{V_{t-lag}}\right)}\right] > buffer \\ \mathrm{E(t\text{-}1)} & if \quad Abs\left[1-\dfrac{\mathrm{E(t\text{-}1)}}{\min\left(\mathrm{L_M}, \dfrac{\alpha_T}{V_{t-lag}}\right)}\right] < buffer \end{cases}$$

where:

– L_M is maximum leverage,

– α_T is the volatility target,

– *"lag"* represents the number of days prior to t that the volatility formula is applied,

– V_t is the realized volatility of the underlying index at day *t* across the last *n* days,

$$\mathrm{V_t} = \left(\frac{252}{n}\sum_{i=t+1-n}^{t} \ln\left(\frac{ULI_t}{ULI_{t-1}}\right)^2\right)^{1/2}$$

– ULI_t is the value of the underlying index on day t,

– *n* is the number of days that the volatility of the underlying index is calculated across.

4.1.3 The target level of risk exposure is re-estimated daily.

4.2 Cash Return

4.2.1 The FTSE 100 Gross 10% Volatility Target Excess Return Index uses the relevant overnight interbank rate as the return on cash.

$$r_C(t) = r(t-2) \times \frac{d(t, t-1)}{DayCount}$$

Where,

– $r(t-1)$ is the overnight interbank rate. The rate applicable to the index is detailed in Appendix C,

– $d(t, t-1)$ is the number of calendar days between *t-1* and *t*,

– *DayCount* is the number of days in a year used in the convention of the corresponding interest rate.

Section 5

Calculation of index

5. Calculation of index

5.1.1 The FTSE 100 Gross 10% Volatility Target Excess Return Index is calculated as follows:

$$EI(t) = EI(t-1) \times \left(1 - r_C(t)\right) \times \left[1 + E(t) \times r_U(t) + \left(1 - E(t)\right) \times r_C(t)\right]$$

where

- $EI(t)$ is the excess return index,
- $E(t)$ is the target level of risk exposure on day t,
- $r_U(t)$ is the underlying index return on day t,

$$\mathrm{r_U(t)} = \frac{(ULI_t - ULI_{t-1})}{ULI_{t-1}}$$

- $r_C(t)$ is the return on cash on day t,
- ULI_t is the underlying index value on day t.

5.1.2 The FTSE 100 Gross 10% Volatility Target Excess Return Index is calculated end-of-day (EOD) after the close of the underlying index.

Appendix A

Headline Index details

Index Name	Max Leverage	Volatility Target	Underlying Index
FTSE 100 Gross 10% Volatility Target Excess Return Index	150%	10%	FTSE 100 Index (GTR)

Appendix B

Other calculation details

Index name	Volatility Window	Buffer	Lag	Cash rate	Day count basis
FTSE 100 Gross 10% Volatility Target Excess Return Index	Max(20,60)	5%	1	SONIA	365

Appendix C

Further information

A glossary of terms used in FTSE Russell's Ground Rule documents can be found through the following link:

Glossary.pdf

Further information on FTSE 100 Gross 10% Volatility Target Excess Return Index 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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