Ground Rules

FTSE TPI Climate Transition Index Series
v2.0
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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 TPI Climate Transition Index Series. Copies of the Ground Rules are available from www.ftserussell.com. TPI stands for the Transition Pathway Initiative.

1.2 The FTSE TPI Climate Transition Index Series is designed to reflect the performance of stocks representing a specific set of TPI and Climate characteristics. The FTSE TPI Climate Transition Index Series is not designed to align with the minimum requirements of the EU Climate Transition Benchmarks, nor the EU Paris aligned Benchmarks.

1.3 These Ground Rules should be read in conjunction with the following index rules and guides which are available at www.ftserussell.com:
- FTSE Global Equity Index Series Ground Rules
- The Corporate Actions and Events Guide for Non Market Capitalisation Weighted Indices
- FTSE Global Factor Index Series Ground Rules
- FTSE EU Climate Benchmarks Index Series
- FTSE Global Climate Index Series Ground Rules
- FTSE Green Revenues Index Series Ground Rules
- FTSE Infrastructure Index Series Rules

1.4 Price and Total Return Indices will be calculated on an end of day basis. The base currency of all indices is US Dollars (USD) and may also be published in other currencies. Total return indices include income based on ex dividend adjustments. All dividends are applied as declared in the FTSE Total Return Index.

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1 The requirements are set out 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 Commission Delegated Regulation (EU) 2020/1818 of 17 July 2020 supplementing Regulation 2016/1011 of the European Parliament and of the Council as regards minimum standards for EU Climate Transition Benchmarks and EU Paris-aligned Benchmarks.
1.5 **FTSE Russell**

1.6 **Statement of Principles for FTSE Russell Non Market Capitalisation Weighted 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 FTSE Russell’s Index Governance Board.

The Statement of Principles can be accessed using the following link:

[Statement_of_Principles_Non-Market_Cap_Equity_Indices.pdf](#)

1.7 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 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 (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 series or any constituent data.
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.\(^2\)

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 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 reviews;
- disseminate the indices.

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 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.

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\(^2\) 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

3.0 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:

Queries_and_Complaints_Policy.pdf

3.2 Index Policy for Trading Halts and Market Closures

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

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

3.3.1 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_or_a_Security.pdf

3.4 Recalculation Policy and Guidelines

3.4.1 The FTSE TPI Climate Transition Index Series is recalculated whenever errors or distortions occur that are deemed to be significant. Users of the FTSE TPI Climate Transition Index Series are notified through appropriate media.

For further information please refer to the FTSE Russell Recalculation Policy and Guidelines document which is available on the FTSE Russell website using the link below:

Recalculation_Policy_and_Guidelines_Equity_Indices.pdf

3.5 Recalculation Policy and Guidelines – ESG Data and Ratings

Where an inaccuracy in ESG data is identified, FTSE Russell will follow the guidelines set out in this document when determining if ESG Data should be recalculated.

Recalculation_Policy_and_Guidelines_ESG_Products.pdf
3.6 **Policy for Benchmark Methodology Changes**

Details of FTSE Russell’s policy for making benchmark methodology changes can be accessed using the following link:

[Policy for Benchmark Methodology Changes.pdf](#)

3.7 **FTSE Russell Governance Framework**

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 Benchmarks³, the European benchmark regulation⁴ and the UK benchmark regulation⁵. The FTSE Russell Governance Framework can be accessed using the following link:

[FTSE Russell Governance Framework.pdf](#)

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³ IOSCO Principles for Financial Benchmarks Final Report, FR07/13 July 2013
⁴ 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
⁵ The Benchmarks (Amendment and Transitional Provision) (EU Exit) Regulations 2019
Section 4

Eligible Securities

4.0 Eligible Securities

4.1 The eligible universe of each TPI Climate Transition index are the constituents of the corresponding underlying index after the application of the exclusion lists detailed in Table 1. A summary of the exclusions categories is provided below and a more complete version is provided in Appendix A.

<table>
<thead>
<tr>
<th>Index Name</th>
<th>Underlying Universe</th>
<th>Exclusion List(s)</th>
</tr>
</thead>
<tbody>
<tr>
<td>FTSE Developed ex Korea TPI Climate Transition Index</td>
<td>FTSE Developed ex Korea Index</td>
<td>Controversial Weapons⁶</td>
</tr>
<tr>
<td>FTSE Developed ex US TPI Climate Transition Index</td>
<td>FTSE Developed ex US Index</td>
<td>Controversial Weapons⁶</td>
</tr>
<tr>
<td>Russell 1000 TPI Climate Transition Index</td>
<td>Russell 1000 Index</td>
<td>Controversial Weapons⁶</td>
</tr>
<tr>
<td>FTSE Japan TPI Climate Transition Index</td>
<td>FTSE Japan Index</td>
<td>Controversial Weapons⁶</td>
</tr>
<tr>
<td>FTSE All World ex Japan Climate Transition Index</td>
<td>FTSE All-World ex Japan Index</td>
<td>Controversial Weapons⁶</td>
</tr>
<tr>
<td>FTSE All-World ex FF TPI Climate Transition Index</td>
<td>FTSE All-World Index</td>
<td>Controversial Weapons⁶</td>
</tr>
<tr>
<td>FTSE All-World ex FF ex Tobacco ex Controversies TPI Climate Transition Index</td>
<td>FTSE All-World Index</td>
<td>Controversial Weapons⁶, Fossil Fuel⁶, Tobacco (A&amp;B)⁷, UN Controversies⁷</td>
</tr>
<tr>
<td>FTSE Developed TPI Climate Transition ex Coal ex Controversies ex Nuclear ex Tobacco Index</td>
<td>FTSE Developed Index</td>
<td>Controversial Weapons⁶, Tobacco (A&amp;B)⁷, UN Controversies⁷, Coal⁷, Nuclear Weapons⁷</td>
</tr>
<tr>
<td>FTSE Developed ex Korea ex Tobacco ex Coal TPI Climate Transition Index</td>
<td>FTSE Developed ex Korea Index</td>
<td>Controversial Weapons⁶, Tobacco (A)⁷, Coal⁷</td>
</tr>
</tbody>
</table>

⁶ Exclusion list reviewed in March and September
⁷ Exclusion list reviewed in March, June, September and December
<table>
<thead>
<tr>
<th>Index Name</th>
<th>Underlying Universe</th>
<th>Exclusion List(s)</th>
</tr>
</thead>
<tbody>
<tr>
<td>FTSE All-World Developed ex Weapons ex FF ex Tobacco TPI Climate Transition Index</td>
<td>FTSE All-World Developed Index</td>
<td>Controversial Weapons⁶ Nuclear Weapons⁷ Firearms⁷ Fossil Fuels⁶ Tobacco⁷</td>
</tr>
<tr>
<td>FTSE Emerging TPI Climate Transition ex Coal ex Controversies ex Nuclear ex Tobacco Index</td>
<td>FTSE Emerging Index</td>
<td>Controversial Weapons⁶ Tobacco (A&amp;B)⁷ UN Controversies⁷ Coal⁷ Nuclear Weapons⁷</td>
</tr>
<tr>
<td>FTSE Global Core Infrastructure TPI Climate Transition Index</td>
<td>FTSE Global Core Infrastructure Index + Alternative Electricity (ICB 65101010)</td>
<td>UN Controversies⁷</td>
</tr>
</tbody>
</table>

The Controversial Weapons exclusion screen does not apply to the FTSE Global Core Infrastructure TPI Climate Transition Index for it is irrelevant to the FTSE Global Core Infrastructure Index + Alternative electricity universe.

4.2 **Excluded Companies**

4.2.1 Product and activity involvement data are collected from publicly available information by FTSE Russell analysts. Where data is not obtained by FTSE Russell analysts, external sources are used to supplement the data including from Sustainalytics.

4.3 **Multiple Lines**

4.3.1 All lines of the same company that are eligible securities are eligible for inclusion in the index.
Section 5

Sustainable Investment Data Inputs

5.0 Sustainable Investment Data Inputs

The following Sustainable Investment datasets are used in the construction of the FTSE TPI Climate Transition Index Series.

5.1 The Transition Pathway Initiative (TPI)

5.1.1 TPI assesses companies’ progress on the transition to a low-carbon economy on two dimensions: Management Quality and Carbon Performance.

5.1.2 Further details on the use of TPI data can be found in the following guide: Guide_to_FTSE_Sustainable_Investment_Data_used_in_FTSE_Russell_Indexes.pdf (ftserussell.com)

5.2 Product activity screening for index exclusions

5.2.1 Product and activity involvement data are collected from publicly available information by FTSE Russell analysts. Where data is not obtained by FTSE Russell analysts, external sources are used to supplement the data including from Sustainalytics.

5.2.2 All data undergo several layers of quality control including consistency checks over time, sector relative checks, and knowledge checks. Where discrepancies are found analysts refer to primary data sources.

5.2.3 Where possible, the definitions for the products and activities refer to international standards and agreements such as the Convention on Cluster Munitions, Ottawa Treaty, and the Biological Weapons Convention.

5.2.4 Further information as to the definitions for product and activity screening can be found here: Guide to the Construction and Maintenance of FTSE Exclusion Lists.

5.2.5 Further information on third party data used can be found here: Guide_to_Third_Party_Sustainable_Investment_Data_used_in_FTSE_Russell_Indexes.pdf (ftserussell.com)

5.3 Green Revenues

5.3.1 Information on the FTSE Green Revenues dataset can be found here: Green Revenues Data Model.pdf

5.3.2 To construct the FTSE Green Revenues dataset, information is collected from publicly available reports by FTSE Russell analysts. Companies are also invited to provide more detailed
information where the subsegmental revenue breakdown in their annual reports is not granular enough to facilitate the green revenues assessment.

5.3.3 To ensure data quality new green revenues assessments are reviewed by senior analysts and automated checks are applied.

5.3.4 The FTSE Green Revenues data model does not currently utilize international standards in its construction but can be used to determine the degree to which companies are exposed to sustainable activities.

5.3.5 Further details on the use of Green Revenues data can be found in the following guide: Guide_to_FTSE_Sustainable_Investment_Data_used_in_FTSE_Russell_Indices.pdf

5.4 Carbon data

5.4.1 Operational Carbon Emissions and Fossil Fuel Reserves data are subject to regular checks to identify discrepancies and ensure accuracy. These checks include trend analysis to assess data quality and detailed review of underlying data for significant changes in data values.

5.4.2 The carbon data does not currently utilize international standards in its construction.

Further details third party data can be found in the following guide:

Guide_to_Third_Party_Sustainable_Investment_Data_used_in_FTSE_Russell_Indices.pdf

5.4.3 Sustainable Investment Metrics

5.4.4 Please see the FTSE Russell Sustainable Investment Metrics website for the ratings, scores and values of the environmental, social and governance (ESG) factors listed in Annex II to Delegated Regulation (EU) 2020/1816 which are taken into account in the benchmark methodology for the benchmarks within this index series.
Section 6

Index Construction

6.0 Index Construction

6.1 The Transition Pathway Initiative (TPI)

6.1.1 TPI assesses companies' progress on the transition to a low-carbon economy on two dimensions: Management Quality and Carbon Performance.

6.1.2 TPI Management Quality (MQ) assesses the quality of companies' management of their greenhouse gas emissions and of risks and opportunities related to the low-carbon transition. MQ scores are derived from the climate theme data from FTSE Russell’s ESG data model based on TPI’s methodology which is published on the public website http://www.lse.ac.uk/GranthamInstitute/tpi/methodology/

6.1.3 TPI Carbon Performance (CP) assesses the carbon emission pathways of individual companies and how this compares to the international targets and national pledges made as part of the UN Paris Agreement. Companies that receive an assessment are categorized into four groups.

- A company’s carbon emissions pathway is aligned with limiting global warming to below 2°C above pre-industrial levels.
- A company’s carbon emissions pathway is aligned with limiting global warming to 2°C above pre-industrial levels.
- A company’s carbon emission pathway is aligned with the public country-level commitments made on the Paris Agreement (known as Nationally Determined Contributions - NDCs) but is not aligned with limiting global warming to 2°C
- A company’s carbon emissions pathway is not aligned with limiting global warming to 2°C above pre-industrial levels or has insufficient disclosures to enable such an assessment.
- A company has not yet been assessed for its Carbon Performance

6.1.4 CP assessments are provided by TPI on an annual basis based on the methodology detailed in Rule 6.1.3.
6.2 Index Construction

6.2.1 The unconstrained index weight of each constituent in the FTSE Climate TPI Transition Index Series $w_i$ is:

$$w_i = \frac{v_i}{\sum_j v_j}$$

where:

$$v_i = w_i' \times A_i^{FF} \times A_i^{CE} \times A_i^{GR} \times A_i^{MQ} \times A_i^{CP}$$

and

- $w_i'$ is the free float adjusted market capitalisation weight of stock $i$ in the eligible universe
- $A_i^{FF}$ is the Fossil Fuel Reserve adjustment for stock $i$ (see Rule 6.2.3)
- $A_i^{CE}$ is the Low Operational Carbon Emissions adjustment for stock $i$ (see Rule 6.2.3)
- $A_i^{GR}$ is the Green Revenue adjustment for stock $i$ (see Rule 6.2.3)
- $A_i^{MQ}$ is the TPI Management Quality adjustment for stock $i$ (see Rule 6.2.4)
- $A_i^{CP}$ is the TPI Carbon Performance adjustment for stock $i$ (see Rule 6.2.5)

6.2.2 Indices in the FTSE Climate TPI Transition Index Series are constructed using either Fixed Tilt or Target Exposure tilt methodologies.

Fixed Tilt Indexes: The strength of the factor tilt is a fixed number for all rebalances.

Target Exposure Indexes: Variable tilt strengths are chosen to satisfy fixed exposure targets

See FTSE Global Factor Index Series for more details on Index Construction.

6.2.3 Fossil Fuel Reserves tilts, Operational Carbon Emissions tilts and Green Revenue tilts are based on each company’s fossil fuel reserves, operational carbon emissions and the FTSE Green Revenues Factor, respectively. These tilts follow the definitions and methodologies as detailed in FTSE Global Climate Index Series Ground Rules and the FTSE Green Revenues Index Series Ground Rules.

6.2.4 The TPI Management Quality Adjustment for stock $i$ is defined as:

$$A_i^{MQ} = (S_i^{MQ})^2 \times \frac{w_i'}{w_k^{MQ}}$$

where Management Quality Z-Scores are mapped to a S-Score $S_i^{MQ} \in [0, 1]$, using the cumulative normal distribution with mean zero and standard deviation one. The creation of S-Scores follows the process described in the FTSE Global Factor Index Series Ground Rules; $k$ is the ICB regional industry that stock $i$ belongs to, $w_i'$ is the free float adjusted market capitalization regional industry weight of the eligible universe and $w_k^{MQ}$ is the regional industry weight determined by applying a double tilt using the S-score $S_i^{MQ}$ to the free float adjusted market capitalization stock weights of the underlying universe.

The FTSE TPI Climate Transition Index Series splits the eligible universe into the following regions: North America, Europe, Latin America, Middle East and Africa, Japan and Asia-Pacific ex Japan.
6.2.5 The TPI Carbon Performance Adjustment $A_{i}^{\text{CP}}$ is assigned to each of the groups detailed in Rule 5.1.3 as following:

- Companies that are aligned to below 2°C are assigned an adjustment factor of 2
- Companies that are aligned to 2°C are assigned an adjustment factor of 1.5
- Companies are aligned at the NDCs level only are assigned an adjustment factor of 0.8
- Companies that are not aligned or have insufficient disclosures to enable such an assessment are assigned an adjustment factor of 0
- Companies are that not assessed are assigned an adjustment of 1

6.3 Capacity Constraints and Minimum Stock Weights

6.3.1 The maximum stock level capacity ratio and constraints are applied to the index without narrowing as detailed in the FTSE Global Factor Index Series Ground Rules.

6.3.2 Any company that is aligned to 2°C or below 2°C in the TPI Carbon Performance assessment with the index weight less than 0.5bps is set as 0.5bps.

6.3.3 A minimum stock level weight of 0.5bps is then applied to the remaining constituents that are not covered in Rule 5.3.2. Any security level index weight that is less than this minimum weight threshold is treated as having a zero weight in the FTSE TPI Climate Transition Index Series, any resulting excess weight will be redistributed amongst the remaining constituents and may cause breaches of the constraints in Rule 6.3.1.

6.4 Country and Industry Exposure Constraints

6.4.1 The maximum active country and industry exposure constraints are defined by the parameters $P$ and $Q$ are applied to the index as detailed in the FTSE Global Factor Index Series Ground Rules.

Alternative Electricity stocks (ICB 65101010) in the FTSE Global Core Infrastructure TPI Climate Transition Index will be grouped as a separate industry when apply the Industry Exposure Constraints.

Index Back-Histories

6.4.2 The annual Fossil Fuel Reserves, Operational Carbon Emissions and annual sales data prior to June 2017 are lagged by one year.

6.4.3 TPI data as of September 2018 is used in the index review process prior to 2018
### 6.5 Fixed Tilt Indices

6.5.1 Table 1 displays the parameters used in the Fixed Tilt Indices.

**Table 1: Fixed Tilt Index Parameters**

<table>
<thead>
<tr>
<th>Index</th>
<th>Tilt Strengths</th>
<th>Constraints</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Fossil Fuel Reserves</td>
<td>Operational Carbon Emission Intensity</td>
</tr>
<tr>
<td>FTSE Developed ex Korea TPI Climate Transition Index</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>FTSE Developed ex US TPI Climate Transition Index</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Russell 1000 TPI Climate Transition Index</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>FTSE Japan TPI Climate Transition Index</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Index</td>
<td>Tilt Strengths</td>
<td>Constraints</td>
</tr>
<tr>
<td>----------------------------------------------------------------------</td>
<td>----------------</td>
<td>-------------</td>
</tr>
<tr>
<td></td>
<td>Fossil Fuel Reserves</td>
<td>Operational Carbon Emission Intensity</td>
</tr>
<tr>
<td>FTSE All World ex Japan Climate Transition Index</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>FTSE All-World ex FF TPI Climate Transition Index</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>FTSE All-World ex FF ex Tobacco ex Controversies TPI Climate Transition Index</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>FTSE Developed TPI Climate Transition ex Coal ex Controversies ex Nuclear ex Tobacco Index</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>FTSE Developed ex Korea ex Tobacco ex Coal TPI Climate Transition Index</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>FTSE All-World Developed ex Weapons ex FF ex Tobacco TPI Climate Transition Index</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>FTSE Emerging TPI Climate Transition ex Coal ex Controversies ex Nuclear ex Tobacco Index</td>
<td>1</td>
<td>1</td>
</tr>
</tbody>
</table>

*See Rule 6.3 for more detail

**See Rule 6.4 for more detail
### Target exposure indices

6.6.1 Table 2 displays the parameters used in the Target Exposure Indices.

**Table 2: Target Exposure Index Parameters**

<table>
<thead>
<tr>
<th>Index</th>
<th>Fossil Fuel Reserves</th>
<th>Operational Carbon Emission Intensity</th>
<th>Green Revenue</th>
<th>TPI Management Quality</th>
<th>TPI CP tilt</th>
<th>TPI Carbon Performance 'Not Aligned' companies emission reduction</th>
<th>P**</th>
<th>Q**</th>
<th>Max Stock Weight (%)</th>
<th>Min Stock weight (bp.)</th>
<th>Max Capacity Ratio</th>
</tr>
</thead>
<tbody>
<tr>
<td>FTSE Global Core Infrastructure TPI Climate Transition Index</td>
<td>100% lower than the benchmark</td>
<td>40% lower than the benchmark</td>
<td>-</td>
<td>0.2σ</td>
<td>½ tilt</td>
<td>100%</td>
<td>0</td>
<td>1</td>
<td>5</td>
<td>5bp</td>
<td>&lt;20x</td>
</tr>
</tbody>
</table>

*σ is the market capitalization weighted standard deviation of Z-scores in the universe.

**See Rule 6.4 for more detail**
Section 7

Periodic Review of Constituents

7.0 Periodic Review of Constituents

7.1 Review Dates

7.1.1 The FTSE TPI Climate Transition Index Series will be reviewed annually in September with the exception of FTSE Global Core Infrastructure TPI Climate Transition Index which will be updated semi-annually in March and September and the Russell 1000 TPI Climate Transition Index which will be reviewed in June. Fossil fuel reserve, operational carbon emission, green revenue and TPI data as of the last business day of the month prior to review month.

7.1.2 Index reviews will use stock prices available as at the close of business on the Wednesday before the first Friday of the review month (price cut-off date) and use shares and free float adjustment as of effective date.

FTSE TPI Climate Transition indices based on Russell indices will use stock prices available as at the close of business on the Wednesday before the second Friday of the review month (price cut-off date) and use shares and free float adjustment as of effective date.

7.1.3 The review will be implemented after the close of business on the third Friday of the review month.

For FTSE TPI Climate Transition indices derived from a Russell index the review will be implemented on the same day as the Russell annual reconstitution. For details of the implementation dates of Russell indices, please refer to the Russell US Equity Indices Construction and Methodology available at Russell-US.
Section 8

Changes to Constituent Companies

8.0 Changes to Constituent Companies

8.1 Intra-review Additions

8.1.1 The FTSE TPI Climate Transition Index Series will not accept intra-review additions. Additions to the corresponding underlying index will be considered for inclusion at the next annual review of the relevant FTSE TPI Climate Transition Index, respectively.

8.2 Intra-review Deletions

8.2.1 A constituent will be removed from a FTSE TPI Climate Transition Index (with a minimum of 2 days’ notice) if it is being removed from its corresponding underlying index and its weight will be distributed pro-rata amongst the remaining constituents in their respective FTSE TPI Climate Transition Index.

8.3 Intra-review Changes to Exclusion Lists

8.3.1 A constituent will be deleted from the FTSE TPI Climate Transition Indices if it is added to the corresponding exclusion lists detailed in table 1 in Rule 4.1. The deletion will be concurrent with its addition to the exclusion lists.

8.3.2 A stock that is removed from a relevant exclusion list detailed in table 1 in Rule 4.1 will be considered for inclusion at the next periodic review.
Section 9

Corporate Actions and Events

9.0 Corporate Actions and Events

9.1 If a constituent in the underlying index 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 TPI Climate Transition Index Series will remain unchanged pre and post such an event.

9.2 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 Indices using the following link:

[Corporate_Actions_and_Events_Guide_for_Non_Market_Cap_Weighted_Indices.pdf](Corporate_Actions_and_Events_Guide_for_Non_Market_Cap_Weighted_Indices.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. The index will be adjusted in line with 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 will provide notice advising of the timing of the change.

9.3 Suspension of Dealing

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

9.4 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 Indices.
Section 10

Indices Algorithm and Calculation Method

10.0 Indices Algorithm and Calculation Method

10.1 Prices

10.1.1 The FTSE TPI Climate Transition Index Series use actual closing mid-market or last trade prices, where available, for securities with local market quotations. Further details can be accessed using the following link:

Closing_Prices_Used_For_Index_Calculation.pdf

10.2 Calculation Frequency

10.2.1 The FTSE TPI Climate Transition Index Series will be calculated on an end of day basis and displayed to eight decimal points.

10.3 Index Calculation

10.3.1 The FTSE TPI Climate Transition Index Series calculated using the algorithm described below:

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

Where,

- $i=1,2,...,N$
- $N$ 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: Exclusions

### Product involvement

<table>
<thead>
<tr>
<th>Non-Renewable Energy</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Fossil Fuel Reserves - Coal, Oil &amp; Gas</strong></td>
<td>Companies that own proved or probable reserves in coal, oil or gas.</td>
</tr>
<tr>
<td><strong>Oil and Gas - Production, supporting products and services</strong></td>
<td>Any company owning oil or gas reserves, and any company with primary business activity in:</td>
</tr>
<tr>
<td></td>
<td>• the exploration for and drilling, production, refining and supply of oil and gas products (as defined by the ICB6 subsector 0533 Exploration &amp; Production) (New ICB Subsector Oil: Crude Producers 60101010) and Oil Refining and Marketing 60101020)</td>
</tr>
<tr>
<td></td>
<td>• the supply of equipment and services to oil fields and offshore platforms, such as drilling, exploration, seismic-information services and platform construction (ICB subsector 0573 Oil Equipment &amp; Services) (New ICB Subsector Oil Equipment and Services 60101030) and Offshore Drilling and Other Services 60101015)</td>
</tr>
<tr>
<td></td>
<td>• the operations of pipelines carrying oil, gas or other forms of fuel (ICB subsector 0577 Pipelines; note that this excludes pipeline operators that derive the majority of their revenues from direct sales to end users) (New ICB Subsector Pipelines 60101035)</td>
</tr>
<tr>
<td></td>
<td>• integrated oil and gas companies, providing a combination of the services listed above, including refining and marketing of oil and gas products (ICB subsector 0537 Integrated Oil &amp; Gas) (New ICB Subsector Integrated Oil and Gas 60101000)</td>
</tr>
<tr>
<td><strong>Coal – Production, supporting products and services</strong></td>
<td>Any company owning coal reserves, and any company with primary business activity in the exploration for or mining of coal (as defined by the ICB subsector 1771 Coal). (New ICB Subsector Coal 60101000)</td>
</tr>
<tr>
<td><strong>Nuclear Power - Generation and Uranium Mining</strong></td>
<td>Companies that generate revenues from nuclear power production. This includes:</td>
</tr>
<tr>
<td></td>
<td>• nuclear power generation</td>
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<tr>
<td></td>
<td>• nuclear power plant equipment, components and construction</td>
</tr>
<tr>
<td></td>
<td>• uranium mining</td>
</tr>
<tr>
<td></td>
<td>• uranium processing and enrichment</td>
</tr>
</tbody>
</table>

### Vice Products

<p>| | |</p>
<table>
<thead>
<tr>
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<tbody>
<tr>
<td><strong>Adult Entertainment</strong></td>
<td>Companies that produce adult entertainment. This includes:</td>
</tr>
<tr>
<td></td>
<td>• movies</td>
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<td></td>
<td>• print publications</td>
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<td></td>
<td>• online content</td>
</tr>
<tr>
<td></td>
<td>• live entertainment</td>
</tr>
<tr>
<td><strong>Alcohol</strong></td>
<td>Companies that produce alcoholic beverages. This includes:</td>
</tr>
<tr>
<td></td>
<td>• all companies that are classified in the Industry Classification Benchmark (ICB) Subsectors Brewers (3533) and Distillers &amp; Vintners (3535) ) (New ICB Subsector Distillers and Vintners 45101015)</td>
</tr>
<tr>
<td></td>
<td>• companies that are not classified in ICB Subsectors Brewers (3533) (New ICB Subsector Brewers 45101010) and Distillers &amp; Vintners (3535) (New ICB Subsector Distillers and Vintners 45101015), but that are identified as having activity in these Subsectors</td>
</tr>
<tr>
<td><strong>Gambling</strong></td>
<td>Companies that provide gambling services. This includes:</td>
</tr>
<tr>
<td></td>
<td>• all companies that are classified in the Industry Classification Benchmark (ICB) Subsector Gambling (5752) (New ICB Subsector Casinos &amp; Gambling 405010200)</td>
</tr>
<tr>
<td></td>
<td>• companies that are not classified in ICB Subsector Gambling (5752) (New ICB Subsector Casinos &amp; Gambling 405010200), but that are identified as having activity in this Subsector</td>
</tr>
<tr>
<td><strong>Tobacco</strong></td>
<td>Companies that produce tobacco products.</td>
</tr>
</tbody>
</table>
This includes:
- all companies that are classified in the Industry Classification Benchmark (ICB) Subsectors Tobacco (3785) (New ICB Subsector Tobacco 45103010) and Cannabis Producers 20103020)
- companies that are not classified in ICB Subsector Tobacco (3785) (New ICB Subsector Tobacco 45103010) and Cannabis Producers 20103020), but that are identified as having activity in this Subsector

(B) Companies providing inputs into tobacco products/manufacturing, but not including retail. This includes rolling papers, tobacco flavoring, and tobacco-specific packaging.

<table>
<thead>
<tr>
<th>Weapons</th>
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</thead>
<tbody>
<tr>
<td>Chemical &amp; Biological Weapons</td>
<td>Companies that produce chemical or biological weapons, or that produce specific and critical parts or services for chemical or biological weapons.</td>
</tr>
<tr>
<td>Cluster Munitions</td>
<td>Companies that produce cluster munitions as defined in the Convention on Cluster Munitions, or that produce specific and critical parts or services for cluster munitions.</td>
</tr>
<tr>
<td>Anti-Personnel Landmines</td>
<td>Companies that produce anti-personnel mines as defined in the “1997 Convention on the Prohibition of the Use, Stockpiling, Production and Transfer of Anti-Personnel Mines and on their Destruction”, or that produce specific and critical parts or services for anti-personnel mines.</td>
</tr>
<tr>
<td>Nuclear Weapons</td>
<td>Companies that produce nuclear weapons systems, or that produce specific and critical parts or services for nuclear weapons systems.</td>
</tr>
</tbody>
</table>
| Conventional Military Weapons | Companies that produce other weapons for military use.  
  This includes:  
  • munitions  
  • vehicles designed to carry military weapons (mounted or demountable)  
  • weapons delivery systems; including mounting and launching systems as well as targeting and guidance systems |
| Firearms                 | Companies that produce firearms or ammunition for non-military use.  
  This includes:  
  • handguns  
  • shotguns  
  • rifles  
  • semi-automatic weapons |

<table>
<thead>
<tr>
<th>Conduct-related</th>
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</thead>
<tbody>
<tr>
<td>Controversies</td>
</tr>
</tbody>
</table>

| Anti-Corruption | Controversies related to Principle 10 of the UN Global Compact, which is derived from the United Nations Convention Against Corruption.  
Principle 10: Businesses should work against corruption in all its forms, including extortion and bribery. |
| Environment      | Controversies related to Principles 7, 8, and 9 of the UN Global Compact, which is derived from the Rio Declaration on Environment and Development.  
Principle 7: Businesses should support a precautionary approach to environmental challenges;  
Principle 8: undertake initiatives to promote greater environmental responsibility; and  
Principle 9: encourage the development and diffusion of environmentally friendly technologies. |
| Human Rights      | Controversies related to Principles 1 and 2 of the UN Global Compact, which is derived from the Universal Declaration of Human Rights.  
Principle 1: Businesses should support and respect the protection of internationally proclaimed human rights; and  
Principle 2: make sure that they are not complicit in human rights abuses. |
| Labor             | Controversies related to Principles 3, 4, 5, and 6 of the UN Global Compact, which is derived from the International Labour Organization’s Declaration on Fundamental Principles and Rights at Work.  
Principle 3: Businesses should uphold the freedom of association and the effective recognition of the right to collective bargaining.  
Principle 4: the elimination of all forms of forced and compulsory labour;  
Principle 5: the effective abolition of child labour; and  
Appendix B: Further Information

A Glossary of Terms used in FTSE Russell’s Ground Rules documents can be found using the following link: [Glossary.pdf](#)

The FTSE Russell Sustainable Investment Metrics website can be found using the following link: [Sustainable Investment Metrics](#)

Further information on the FTSE TPI Climate Transition 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](mailto:info@ftserussell.com).

Website: [www.ftserussell.com](http://www.ftserussell.com)