

Overview

Integrating climate change into index-based portfolios has to date focused largely on lowering exposure to carbon (i.e. fossil fuel reserves and/or carbon emissions). However, demand for more sophisticated implementation options for capturing the risks and opportunities arising from the climate transition (i.e. the shift to a low carbon economy) is growing.

The FTSE TPI Climate Transition Index Series fills this gap by providing investors with the next generation of climate indexes. It combines FTSE Russell's expertise in climate data and sustainable investment index design with the Transition Pathway Initiative's (TPI) analysis of how the world's largest and most carbon exposed / intensive public companies are managing the climate transition.

Index constituent weights are adjusted using five transparent criteria: company exposure to specific climate related risks (carbon emissions; fossil fuel reserves) and opportunities (green revenues) as well as the extent of climate governance activities (management quality) and commitments to 2 degree aligned emissions pathways (carbon performance). Meaningful adjustments based on the TPI's forward-looking analysis ensure that leading and lagging company behavior is clearly reflected in the index.

Benefits

- Provides a clear picture of company alignment with the climate transition based on five climate parameters
- Combines market-leading insights and data from FTSE Russell and the Transition Pathway Initiative
- Delivers significant improvements across all climate parameters carbon, green revenues and 'Paris alignment' – whilst managing tracking error vs the benchmark
- Transparent index construction using FTSE Russell's tilt-based multi-factor methodology – supports investor stewardship and corporate engagement activities

Features

- The index series methodology is designed to reflect the performance of a global and diversified basket of securities where their weights are varied to account for risks and opportunities associated with the transition to a low carbon economy
- Constituent weights are adjusted based on five key climate considerations. FTSE Russell inputs capture company exposure to:
- Green Revenues
- Fossil Fuel Reserves
- Carbon Emissions
- TPI inputs provide forward-looking views on company alignment with the climate transition via:
- Management Quality: Companies' climate governance activities (aligned with the Taskforce on Climate-related Financial Disclosures' recommendations)
- Carbon Performance: Company commitments to emissions pathways that are aligned to the Paris Agreement and 2DC/below 2DC warming scenarios

Follows FTSE Global Factor Index Series transparent, rules-based methodology to address concerns about liquidity, capacity, diversification and turnover

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Climate change parameter

	Climate parameter	Adjustment
	Fossil fuel reserves	Underweight companies with fossil fuel reserves
M	Carbon emissions	Over or underweight companies according to their GHG emissions
		Sector neutrality
(\$°)	Green revenues	Overweight companies engaged in the transition to a green economy
000	Management quality	Over or underweight companies according to their Management quality ("alignate gays and a ") according to their Management quality
		("climate governance") score • Regional industry neutrality
	Carbon performance	Over or underweight companies according to their carbon performance ("2DC/Below 2DC pathways") assessment

FTSE TPI Climate Transition Index Series Family

	Universe	Climate exposure	Exclusions
		M	\triangle
FTSE All-World TPI Transition ex FF ex Tobacco ex Controversies Index	FTSE All-World	Carbon Green Revenues Transition alignment	Fossil Fuels Tobacco Controversies
FTSE All-World ex Japan TPI Climate Transition Index	FTSE All-World ex Japan	Carbon Green Revenues Transition alignment	
FTSE Developed TPI Climate Transition ex Coal ex Controversies ex Nuclear ex Tobacco Index	FTSE Developed	Carbon Green Revenues Transition alignment	Coal Tobacco Controversies Nuclear
FTSE Developed ex Korea TPI Climate Transition Index	FTSE Developed ex Korea	Carbon Green Revenues Transition alignment	
Russell 1000 TPI Climate Transition Index	Russell 1000®	Carbon Green Revenues Transition alignment	
FTSE Japan TPI Climate Transition Index	FTSE Japan	Carbon Green Revenues Transition alignment	

Aligning an index with the climate transition

Investor approaches to integrating climate considerations into investment strategy and implementation decisions are increasing in sophistication. This has led to growing demand for index based solutions that capture the climate transition and the goals of the UN Paris Agreement. Meeting this demand requires indexes that go beyond a narrow focus on carbon emissions and/or fossil fuel reserves exposure to integrate company activity within the green economy. In addition, an index aligned with the climate transition needs to capture company commitments to the TCFD, along with emissions pathways – in particular for the most carbon intensive companies globally – that are aligned with international (e.g. 2DC warming) targets.

The FTSE TPI Climate Transition Index Series achieves this by bringing together data and analysis from both FTSE Russell and the Transition Pathway Initiative (TPI). Our partnership with the TPI has enabled the design and development of this unique index series.

The TPI aims to evaluate what the transition to a low carbon economy looks like for companies with a high impact on climate change. It also aims to assess how prepared these companies are for the low carbon transition. Full details of the TPI, including its research methodologies, are available at www.transitionpathwayinitiative.org.



Index overview 2

Index Construction Process

Starting universe

Start with market capitalization weighted index (e.g. FTSE Developed ex-Korea Index)

Step 1

Exclude companies

Exclude companies that produce controversial weapons (anti-personnel mines, cluster munitions, chemical and biological weapons).



Translate scores into tilts

Adjustments to constituent weights are achieved using 'tilts' (over or under weights) and are based on a range of constituent-level data. Standard 'climate tilts' achieve a significant reduction in exposure to both fossil fuel reserves and carbon emissions. Weights are increased for constituents generating green revenues from a wide range of green economy sectors. Climate governance and commitments to 'Paris aligned' carbon emissions pathways (based on the TPI's Management Quality and Carbon Performance assessments, respectively) are over emphasized using stronger tilts – to create clear and meaningful alignment with the objectives of the TPI. In particular, companies identified as not aligned to the objectives of the Paris Agreement are removed from the index (but remain eligible for inclusion and can be re-admitted once 'Paris aligned' commitments are evident).

Neutrality adjustments are applied to the Management Quality scores (regional industry neutrality) and, separately, operational carbon emissions (sector neutrality) to manage deviations from the underlying benchmark.



Narrow index and constrain final weights

Remove stocks which do not contribute to the overall factor objective, whilst ensuring that diversification constraints are not breached.

The following constraints are applied during this process:

- · Country and Industry weight constraints
- Maximum stock level capacity ratio
- · Minimum stock weight



Publish and Review Index

The indexes are reviewed annually in September.

Index overview 3

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