Index Insights | Sustainable Investment - Equity

Helping meet climate goals through index design

The FTSE TPI Climate Transition Index Series

July 2024

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Overview

As the transition to the low-carbon economy moves ahead, financial institutions are seeking tools to assess companies' preparedness for the climate transition and their progress in meeting climate goals. This is becoming an important element in investors' decision-making and engagement activities.

In this paper we examine the FTSE TPI climate transition framework and its application, particularly in the FTSE TPI Climate Transition Index Series.

The Transition Pathway Initiative (TPI) is a global initiative led by asset owners and supported by asset managers. It assesses companies' preparedness for the transition to a low-carbon economy. FTSE Russell, an LSEG business, is the data partner of the TPI; the Grantham Research Institute on Climate Change and the Environment, based at the London School of Economics and Political Science, is the academic partner of this collaborative initiative.

The FTSE TPI Climate Transition Index Series includes diversified indices that reweight constituents based on the risks and opportunities associated with the transition to a low-carbon economy. The indices are forward-looking by nature, embedding assessments of corporate climate governance and carbon emission reduction efforts.

The FTSE TPI Climate Transition Index Series is already used by a wide range of asset owners and asset managers in index-tracking investment strategies, as well as supporting those investors' engagement strategies.

Contents

What is the Transition Pathway Initiative?

The Transition Pathway Initiative (TPI) was created in 2017 as a joint initiative of the National Investing Bodies of the Church of England and the Environment Agency Pension Fund. The TPI is now a global effort, led by asset owners and supported by asset managers, representing around $60 trillion in assets under management or advisement worldwide (as of March 2024).

One of the TPI's missions is to assess the progress of corporations on the transition to a low-carbon economy. The TPI also publishes separate climate assessments for corporate bond issuers, banks and sovereigns. The TPI's research is based on publicly available information and its assessments are free for all to use. Among those making use of TPI research and data are investors as they aim to mitigate their portfolios' climate transition risks.

FTSE Russell co-produces the TPI Management Quality data and has created a growing range of indices incorporating a combination of data inputs from the TPI and in-house climate data sets.

For example, the FTSE TPI Climate Transition Index Series reweights several global and diversified, regional or sectoral universes based on five key climate parameters, including companies' TPI scores (see below for a description of the index methodology). The series is an area of ongoing product development, currently including the following indices:

– The FTSE Developed ex Korea TPI Climate Transition Index, which forms the basis of a passive (index-tracking) portfolio run by a manager on behalf of the Church of England Pensions Board

– The FTSE Global Core Infrastructure TPI Climate Transition Index (see the case study below)

– The FTSE Emerging TPI Climate Transition Index

– The Russell 1000 TPI Climate Transition Index, and several others

Figure 1: TPI at a glance

Source: TPI, as of March 2024.

Cutting carbon and the climate transition

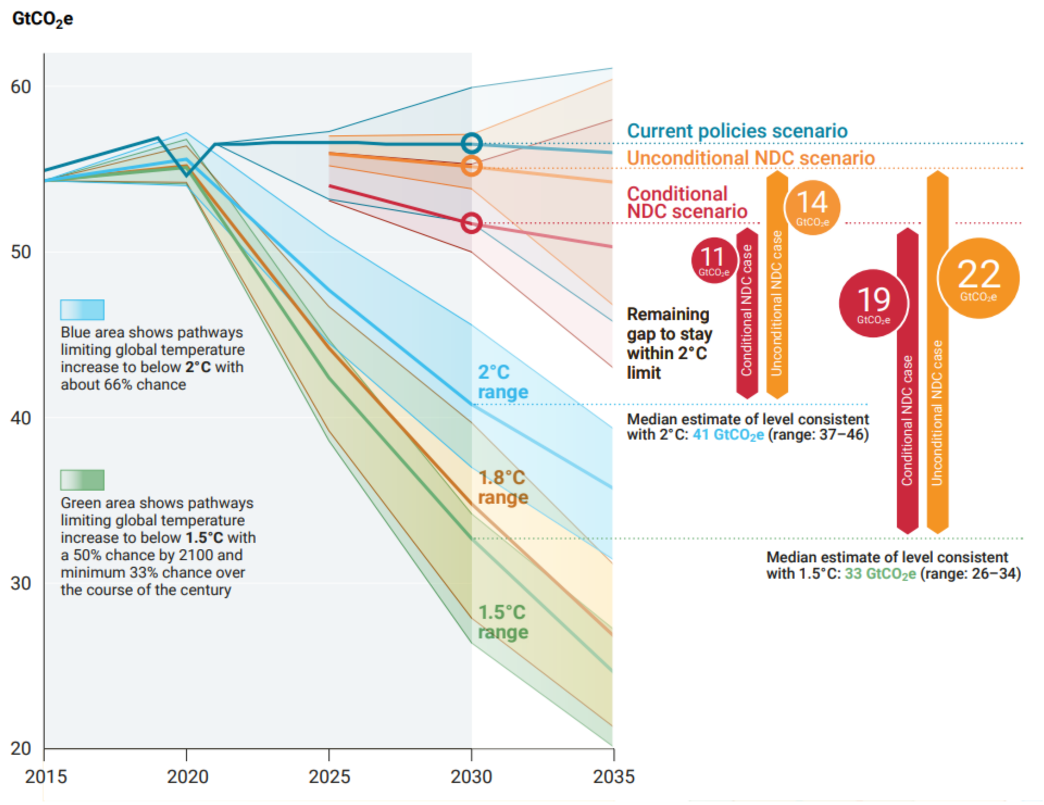
Climate change is a defining global risk of the 21st century. The World Economic Forum ranked extreme weather events as the second short-term global risk by severity in 2024, and as the number one long-term risk[1].

Under the 2015 Paris Agreement, 196 countries committed to limiting increases in the global average temperature to below 2°C above pre-industrial levels, and to pursuing efforts to limit it to 1.5°C above pre-industrial levels. These goals require deep cuts in global carbon emissions by 2050. However, the current trajectory on emissions suggests an overshoot of the goals (which imply a cut in emissions from 2030 onwards – see Figure 2). Reaching the goals will therefore require dramatic changes in company strategies and activities.

For the world's economy, it means a large-scale transition to low-carbon production and consumption systems. It will impact most economic sectors, and requires a huge reallocation of capital from high-carbon to low-carbon assets. For private investors this will mean a revamp of current capital allocation strategies. The financial industry plays a key role in developing investment frameworks, data and products to support those decisions.

[1] WEF_The_Global_Risks_Report_2024.pdf (weforum.org)

Figure 2: Paris Agreement targets



Source: [UNEP Emissions Gap Report 2023]

TPI design principles

To help achieve decarbonisation goals, the TPI serves a variety of use cases. For investors, it is mainly a climate risk mitigation tool. TPI data can be used by investors to assess which companies have sufficient Paris-aligned decarbonisation plans, enabling them to reweight their positions in portfolios based on this information. The TPI also provides information to help investors engage with companies on carbon disclosure and policies, as explained in our 2021 paper on active ownership and engagement through index investing (see the section below). And it can be used to shape company action through shareholders' voting strategies.

How can passive investment improve sustainability?

The growth in the use of sustainability indices by asset owners and asset managers has created an opportunity for a new type of issuer engagement that is linked to the index methodology and rules.

If companies understand how they can achieve inclusion in a sustainability index, they can be incentivised to achieve a real-world improvement in corporate sustainability performance. The incentives can then extend to greater investment flows as larger asset volumes follow the index-linked funds.

The collaborative engagement exemplified by the Transition Pathway Initiative (TPI) provides a powerful and simple approach to engagement on climate performance.

The weight of asset-owner backing for the TPI, the clear engagement agenda involved and the simplicity and transparency of the TPI index approach collectively send a strong message to companies about what is expected of them by investors.

While traditional shareholder engagement remains important, sustainability indices can support an effective new lever for engagement. Corporate engagement through index investing can complement the more traditional forms of shareholder engagement carried out by active asset managers.

Sustainability index design can support scalable, efficient, and impactful corporate engagement across entire markets. It offers clear incentives for companies to improve sustainability performance and deliver the outcomes sought by asset owners and society at large.

For more on this topic, read the 2021 FTSE Russell paper: [Active Ownership through Index Investing | LSEG]

To serve these purposes, the TPI framework embeds the following design principles

- **Transparency** — company assessments should be based solely on publicly available information
- **Objective** — indicators should be objectively assessable, so companies can understand how they have been scored
- **Relevant** — TPI management quality indicators (see below) should be relevant to all companies in the research universe
- **Sector-specific** — TPI carbon performance benchmarks (see below) should be sector-specific and account for the challenges each sector faces in the transition to a low-carbon economy
- **Useful** — the tool should be useful to asset owners, asset managers and the broader public, regardless of their individual levels of expertise
- **Compatible** — the TPI indicators should link to and be compatible with existing climate frameworks, such as the Task Force on Climate-Related Financial Disclosures (TCFD) and the Net Zero Investment Framework
- **High-level** — TPI indicators should be pitched at a high level and apply to the whole corporation

TPI methodology

The TPI's methodology was developed by an international group of asset owners, in partnership with the Grantham Research Institute on Climate Change and the Environment at the London School of Economics and Political Science, supported by data from FTSE Russell.

The methodology has two components, each based on publicly available information:

- **Management Quality (MQ)** — the quality of companies' management of their greenhouse gas emissions and of risks and opportunities related to the low-carbon transition
- **Carbon Performance (CP)** — how companies' carbon performance now and in the future might compare to the international targets and national pledges made as part of the Paris Agreement

TPI Management Quality assessment

Companies’ management quality is assessed against a series of indicators, covering issues such as company policy, emissions reporting and verification, targets, strategic risk assessment and executive remuneration. Based on their performance against these indicators, companies are placed on one of six steps on the TPI staircase:

– Level 0 (unaware of, or not acknowledging climate change as a business issue)

– Level 1 (awareness—acknowledging climate change as a business issue)

– Level 2 (building capacity)

– Level 3 (integrating climate change into operational decision-making)

– Level 4 (strategic assessment)

– Level 5 (transition planning and implementation)[2]

Figure 3: TPI management quality staircase

Source: [2023-methodology-report-management-quality-and-carbon-performance-version-5-0 (transitionpathwayinitiative.org)].

TPI Carbon Performance assessment

Companies’ carbon performance is based on the Sectoral Decarbonization Approach (SDA), which translates the absolute, global-economy-wide emissions budget into sectoral budgets, against which the individual companies’ targeted emissions can be compared.

[2] Not yet used in FTSE Russell indices at the time of writing in 2024, but will be in future

TPI uses 3 benchmark scenarios, which in most sectors[3] are:

– a “1.5 degrees” scenario (which is consistent with a carbon budget that limits the global mean temperature rise to 1.5°C, with a 50% probability)

– a “below 2 degrees” (which is consistent with a carbon budget that limits the global mean temperature rise to 1.65°C, with a 50% probability)

– a “national pledges” scenario (which is consistent with a carbon budget that limits the global mean temperature rise to 2.6°C by 2100, with a 50% probability)

Companies’ emissions intensity paths are derived from public disclosures (including responses to the annual CDP questionnaire, as well as companies’ own reports) as far as possible. Company disclosures are used to estimate recent and current emissions intensity and are the source of information on targets for future emissions.

How do TPI scores incentivise decarbonisation?

TPI scores can incentivise companies to commit to decarbonisation in different ways.

The TPI data is used by large investors to scrutinise companies’ climate transition plans and their decarbonisation commitments. As the information is public, it increases the pressure on corporates to improve levels of disclosure and to commit more strongly to the climate transition.

Typically, by using TPI assessments in their engagement efforts, investors can focus on the largest corporate greenhouse gas emitters (for example, via the Climate Action 100+ initiative). In this way, companies are encouraged to improve their disclosures and, by a ripple effect, sector or market peers are then encouraged to do so too.

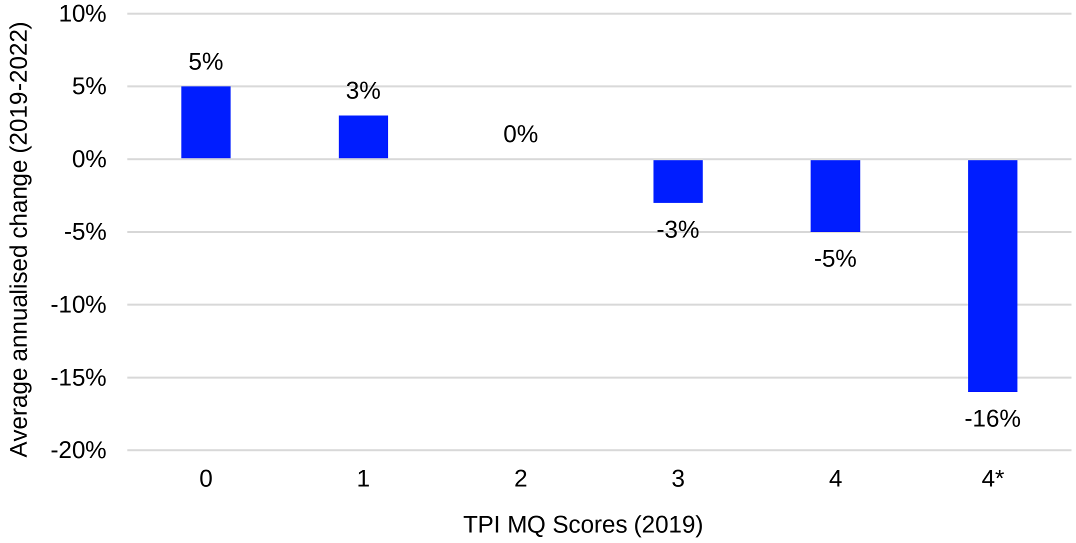
Using TPI scores as key performance indicators

In a study published in 2023[4], researchers at FTSE Russell found that companies with high TPI management quality (MQ) scores are more likely to reduce their carbon emissions, as well as to deliver larger emissions reductions than those with low TPI MQ scores (see Figure 4).

This research is an indication that TPI MQ scores can be a useful tool to identify companies that are more likely to decarbonise in the future.

[3] Carbon performance methodologies are sector-specific. For more details, see the Transition Pathway Initiative methodology document.
[4] “Deliberate decarbonisation”, FTSE Russell, June 2023

Figure 4: Average annualised change in Scope 1 and Scope 2 carbon emissions by TPI MQ score (for FTSE All-World index members)



Source: FTSE Russell, June 2023.

When used in combination with traditional carbon metrics such as carbon emissions or emissions intensity, the TPI MQ scores can also help investors to:

- **Engage with companies on transition efforts** - TPI MQ scores can be used as key performance indicators to flag companies that are climate transition leaders and laggards, providing an evidence base for corporate engagement
- **Track and report on transition risks in portfolios** - (TPI MQ scores can help identify parts of the portfolio that lack adequate transition strategies
- **Manage transition risk exposure and support security selection/portfolio construction** - TPI MQ scores can support security selection, particularly in carbon intensive sectors, and can be used as a factor in the construction of climate-aligned indices, such as the FTSE TPI Climate Transition index

The FTSE TPI Climate Transition Index Series

The FTSE TPI Climate Transition Index Series is designed to reflect the performance of diversified indices where constituents' weights vary to account for risks and opportunities associated with a low-carbon economy. It offers investors a solution to support their climate-transition portfolio ambitions and commitments, combining FTSE Russell's expertise in climate data and index design with TPI analysis of how the world's largest and most carbon-intensive public companies are managing their climate transitions.

Index constituent weights are adjusted using five parameters simultaneously (see Figure 5): companies' fossil fuel reserves, their greenhouse gas emissions, their exposure to green revenues, their TPI management quality scores and their TPI carbon performance scores.

Figure 5: Climate change parameters in the FTSE TPI Climate Transition Index Series

Climate parameter	Adjustment	Overall index reweighting
Fossil Fuel Reserves	• Underweight companies with fossil fuel reserves	Net weight is the combination of individual climate parameter adjustments
Carbon Emissions (Scopes 1 & 2)	• Over or underweight companies according to their GHG emissions • Sector neutrality	
Green Revenues	• Overweight companies engaged in the transition to a green economy	
TPI Management Quality	• Over or underweight companies according to their Management Quality (Climate Governance) score • Regional industry neutrality	
TPI Carbon Performance	• Over or underweight companies according to their carbon performance ("1.5ºC/below 2ºC pathways") assessment	

Source: FTSE Russell.

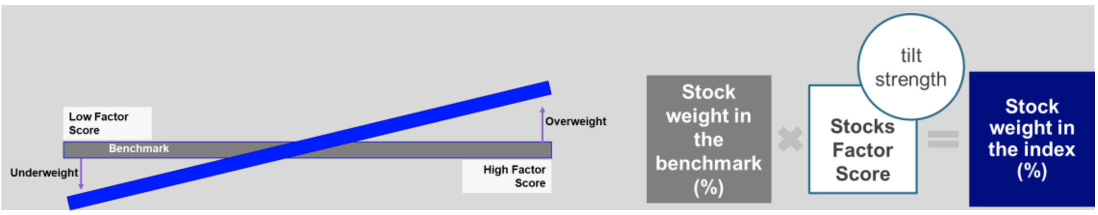
The indices within the series make use of FTSE Russell's tilting methodology to reweight the index constituents according to their performance against key climate parameters. Typically, each stock weight in the final index results from multiplying the benchmark weight by a series of tilts. A tilt reflects a constituent's performance against a climate parameter. The stock weight is multiplied by the several tilts simultaneously, and as the tilts are multiplicative the outcome is independent of how they are ordered.

It is worth noting that a tilt is the stock factor score (here climate factor score) multiplied by its exponent. In a Fixed tilt methodology, which is the approach adopted for most of the indices in the FTSE TPI Climate Transition Index Series, the tilt strength, which is an exponent to the factor score, is fixed. In a Target exposure methodology, the tilt strength is determined by a desired outcome (called a target) where an equation solves for this target (e.g. 30% reduction in emission intensity vs. the underlying index).

As such, the tilt strength can be varied to reflect index users' requirements. Other index characteristics (such as active risk exposure, diversification, capacity and concentration) can also be managed through the tilt mechanism.

In summary, the tilt methodology allows reweighting of an index on various factors, including those relevant to the FTSE TPI Climate Transition indices. Although each factor influences the stock overweight or underweight in isolation, the simultaneity of factors through the tilts is what determines a stock weight in a final index.

Figure 6: FTSE Russell tilt methodology



Source: FTSE Russell.

Meaningful adjustments based on the TPI's forward-looking carbon analysis ensure that leading and lagging company behaviour is clearly reflected in the index through the series of tilts.

Figure 7: Index construction – illustrative example

Constituent	Benchmark Weight %	Carbon Intensity	Green Revenue	MQ	CP	Index Weight %	Weight Change
Company A	0.10	⇧⇧⇧	⇧⇧	⇩	⇧⇧⇧	0.50	4.83x
Company B	1.08	⇩⇩	⇧⇧⇧⇧	⇩⇩⇩⇩	⇧⇧⇧	0.41	0.37x
Company C	0.27	⇩⇩⇩	⇧	⇩	⇧	0.14	0.51x
Company D	0.39	⇧	⇧⇧	⇧⇧	⇧⇧	1.19	3.08x
Company E	0.41	⇩⇩⇩⇩	⇧	⇧⇧⇧	⇧	0.38	0.91x

Source: FTSE Russell. For illustrative purposes only.

Building a climate transition index for the infrastructure asset class. Case study: FTSE Global Core Infrastructure TPI Climate Transition index

As an asset class, listed infrastructure has in the past demonstrated several attractive investment characteristics, such as[5]:

– Greater inflation sensitivity than conventional equities

– Defensive qualities and resilience during market downturns

– Possible yield enhancement

However, these benefits often come at a cost in terms of carbon emissions. According to a 2021 study by UNOPS, UNEP and the University of Oxford[6], infrastructure is responsible for 79 percent of all greenhouse gas emissions and 88 percent of all adaptation costs.

Indeed, FTSE Russell has observed that its infrastructure investment universes tend to have a higher carbon intensity than standard equity universes.

Leading investment consultant Mercer asked FTSE Russell to research whether it would be possible to create an equity portfolio that retained the core investment characteristics of infrastructure, while also committing to a climate transition pathway[7].

The **FTSE Global Core Infrastructure TPI Climate Transition index** takes the stocks from three core infrastructure sectors (transportation, energy and telecommunications), according to the index core

[5] See "Practical considerations for listed infrastructure", Index Insights, FTSE Russell, June 2019.
[6] See Infrastructure for Climate Action | UNEP - UN Environment Programme
[7] See FTSE Russell Case Study - Integrating climate risk into listed infrastructure (lseg.com)

sector selection methodology, and adjusts stock weights to account for the risks and opportunities associated with the transition to a low-carbon economy.

Four climate change considerations are used to determine the index's constituent weights: fossil fuel reserves, carbon emission intensity, climate governance and carbon performance. Companies are screened for product- and conduct-related criteria according to FTSE's minimum set of exclusions.

The index 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/carbon-intensive public companies are managing the climate transition.

Conclusion

To date, FTSE Russell has launched 19 TPI Climate Transition indices, covering global, developed, emerging market and regional equity universes (as of May 2024).

As investor approaches to integrating climate considerations into investment strategy and decision-making are increasing in sophistication, indices need to move beyond a narrow focus on carbon emissions and/or fossil fuel reserves.

Instead, indices need to capture company disclosure according to the Task Force on Climate-Related Financial Disclosures, together with the pathways along which the most carbon-intensive companies will need to reduce their emissions. Indices should also reflect the growing role of the green economy.

The FTSE TPI climate framework, which underlies the FTSE TPI Climate Transition Index Series, achieves these goals by integrating transition data and analysis into index design, helping users assess how prepared companies are for the low-carbon transition.

As well as informing a growing number of portfolios tracking long-term savings indexes, the FTSE TPI Climate Transition indices provide a valuable tool for investors’ stewardship and investment activities.

ABOUT FTSE RUSSELL

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