S&P Dow Jones Indices

A Division of S&P Global

Identifying and Implementing Net-Zero-by-2050 Strategies: A Case Study

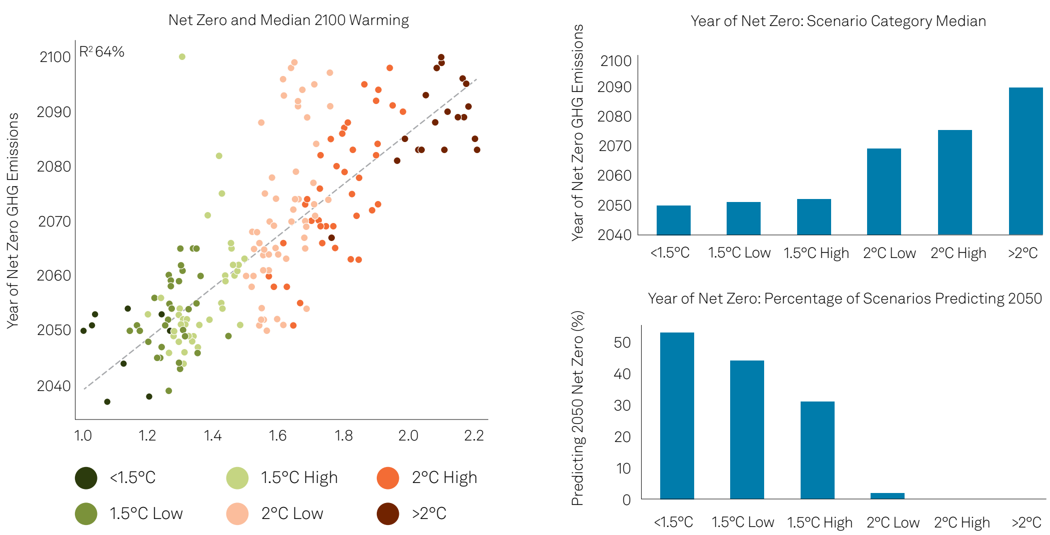
Client: London LGPS CIV

Index Selected: S&P Developed Ex-Korea LargeMidCap Net Zero 2050 Paris-Aligned ESG Index

Objective: Net Zero by 2050/Net Zero Alignment

Typically, low-carbon indices have largely seen relative decarbonizations—improvements against the underlying index—but not Paris Agreement-aligned absolutely sustainable strategies. To be aligned with the Paris Agreement (i.e., a net zero scenario) and absolutely sustainable with regards to greenhouse gas (GHG) emissions, a strategy must align with a specified GHG emissions reduction pathway. To reach net zero by 2050, scientific consensus explains that 1.5°C scenarios would likely help to meet this goal, while 2°C scenarios would most likely reach net zero closer to 2070-2080 (see Exhibit 1).

Exhibit 1: 1.5°C Scenario Implies Net Zero by 2050; 2°C Scenario Implies Net Zero by 2070-2080



Source: S&P Dow Jones Indices LLC, IIASA.[1] Data as of Aug. 8, 2019. Charts are provided for illustrative purposes.

While net zero alignment may be a key target, it isn't the only climate or ESG concern faced by investors. The changing climate potentially exposes us to transition and physical risks, while other broader ESG factors may be ethically desirable, financially material, or both. Many of these ESG factors are uncorrelated, which can make it difficult to understand what the real goal is for a multifaceted ESG investing strategy.

The question then becomes: how best to align with a targeted climate scenario and can this be done alongside other ESG objectives?

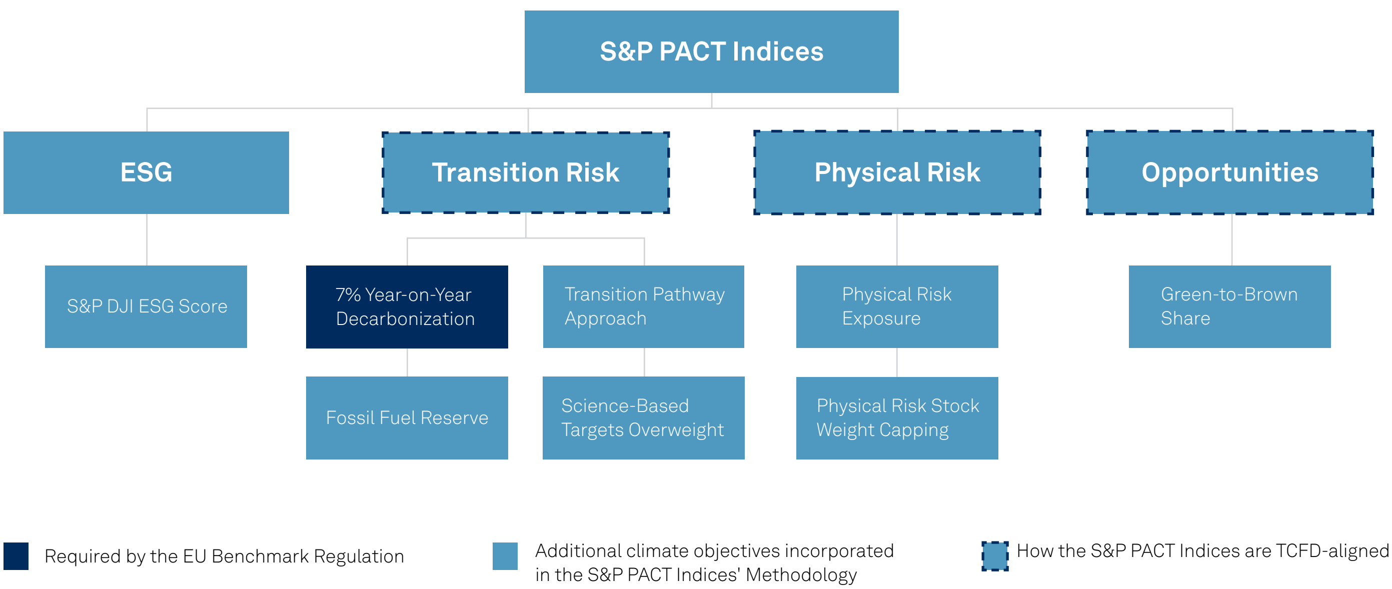
1 Huppmann, D., Kriegler, E., Krey, V., Riahi, K., Rogelj, J., Calvin, K., . . . Zhang, R., IAMC 1.5°C Scenario Explorer and Data hosted by IIASA. Integrated Assessment Modeling Consortium (IAMC) & International Institute for Applied Systems Analysis (IIASA), 2019.

The Solution

The S&P PACT™ Indices (S&P Paris-Aligned & Climate Transition Indices) represent a sophisticated approach that aims to align with a 1.5°C scenario and net zero by 2050. The indices are also intended to meet the EU's minimum standards for EU Climate Transition benchmarks (CTBs) and EU Paris-aligned benchmarks (PABs) and the recommendations of the Task Force on Climate-related Financial Disclosures (TCFD), with the goal of being as efficient as possible to allow for a broad, diversified index.

First, the indices exclude securities based on undesirable exposures, then reweight the remaining constituents (see Exhibit 2). Through the lens of the TCFD recommendations on climate-related financial risks and opportunities, the index reweights toward companies that are better aligned with a 1.5°C scenario and have green revenues driving their business, robust science-based targets, and high ESG scores, while reweighting away from those with high GHG intensity, high potential physical risk, and fossil fuel reserves—all while maintaining the same level of high climate impact exposure as the underlying index.

Exhibit 2: S&P PACT Indices Reweighting Factors

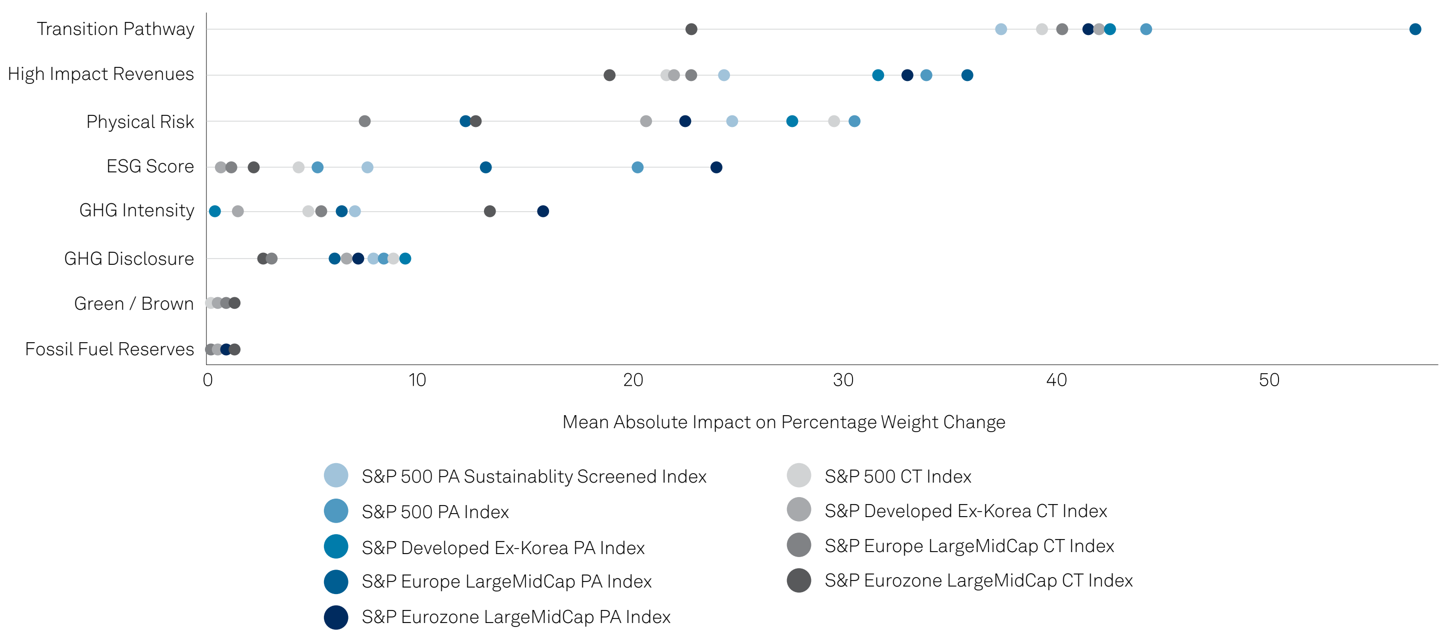


Source: S&P Dow Jones Indices LLC. Chart is provided for illustrative purposes.

The S&P PACT Indices align with the 1.5°C scenario—first by reducing overall GHG emissions intensity compared to the relevant underlying index (30% for CTB-aligned indices and 50% for PAB-aligned indices) and subsequently using the 7% year-on-year GHG emissions reduction required by the EU's minimum standards for CTBs and PABs. In addition, the forward-looking measure, based on academic models, is used to assign companies a GHG budget that represents their fair share of the global carbon budget, while incorporating companies' forward-looking decarbonization targets.

The S&P PACT Indices offer improvements on many ESG fronts, which poses an attribution problem—which of these really drive the weight allocation? A weight attribution analysis can help answer this question. Aligning with 1.5°C scenarios on a forward-looking basis takes some active reweighting—significantly more than the GHG intensity required to be on the 7% year-on-year pathway.

Exhibit 3: What Drives the S&P PACT Indices Weights?



Source: S&P Dow Jones Indices LLC. Data as of June 30, 2021. Chart is provided for illustrative purposes.

Ultimately, the S&P PACT Indices offer a sophisticated, explainable exposure to align with the 1.5°C and 2050 net zero scenarios, offering access to potential climate opportunities and improvements across a broader sustainability lens, while reducing potential future climate risk across transition and physical risks.

Client Feedback

Net zero commitments are starting to receive signatories, as illustrated by the Net-Zero Asset Owner Alliance (with 61 institutional investors representing USD 10 trillion in AUM) and the Net Zero Asset Managers Initiative (with 220 signatories representing USD 57 trillion in AUM).[2] The S&P PACT Indices were launched in mid-2020, and since that date S&P Dow Jones Indices (S&P DJI) has seen increased interest and adoption of these indices by institutional investors across multiple geographies.
To understand better the success of this methodology and learn why an increasing number of institutions are adopting approaches based on the S&P PACT Indices into their climate strategies, we spoke to London LGPS CIV's Jacqueline Jackson, Head of Responsible Investment (RI) and Gustave Loriot, RI Manager about the launch of a fund that tracks the S&P Developed Ex-Korea LargeMidCap Net Zero 2050 Paris-Aligned ESG Index (the "Fund").

S&P DJI: Given the wealth of climate solutions currently available, what differentiates the S&P DJI PACT Indices from other climate solutions?

Gustave: Over the past year, London CIV has worked along with client funds through seed investment groups (SIGs) on the design of a passive low-carbon equity vehicle aligned with the objectives of the Paris Agreement. Recognizing that the greatest opportunity for adding value with this fund is through the selection of the index, we conducted an extensive review of climate-aware index solutions. Based on the constraints specified by members of the SIG, we identified the S&P Developed Ex-Korea LargeMidCap Net Zero 2050 Paris-Aligned ESG Index as the most fitting. We also concluded that the S&P PACT Indices Methodology is the most advanced in addressing the common pitfalls associated with passive, climate-aware investing, including the following concerns.

- **Extraordinary Reallocations of Climate Risk Due to Gaps in Data**
  Gaps in data can create undesirable reallocations of climate risk within an index. For example, focusing on Scopes 1 and 2 emissions (which are widely reported by companies) but discarding Scope 3 can reallocate carbon risk along the value chain. It was therefore incredibly important for us to select an index that leverages high-caliber data in the index optimization. S&P Global Trucost is a market leader on climate data, and its underlying carbon data is one of the most comprehensive on the market—covering over 15,000 companies. Perhaps more importantly, the 464 Trucost sectors (based on revenue streams rather than company-level classifications) make for strong models in predicting Scope 3 emissions.

  Reallocations of climate risk within a benchmark may also result from the decision made by some index providers to only focus on one specific area of climate (such as transition risk) but not account for the full spectrum of climate-related risks and opportunities companies may face in line with the TCFD recommendations. We felt that it was incredibly important for a holistic climate-aligned strategy to address all types of climate risk. For instance, few climate indices currently mitigate physical risk exposure with the same asset level of precision as the S&P PACT Indices.

  In short, the S&P PACT Indices address unfavorable reallocations of climate risk present in some indices by leveraging precise data (including modeled) and by addressing each type of climate risk.

[2] UN Environment Programme Finance Initiative, "Institutional investors transitioning their portfolios to net zero GHG emissions by 2050," https://www.unepfi.org/net-zero-alliance/. Net Zero Asset Managers Initiative, https://www.netzeroassetmanagers.org/.

- **Sub-Standard Climate Solutions Exposure**
  In defining the climate constraints for the Fund, members of the SIG wanted to ensure that the selected index would provide increased exposure to companies actively contributing to the transition to a low-carbon economy. Many indices (including the S&P Developed Ex-Korea LargeMidCap Net Zero 2050 Paris-Aligned ESG Index) do have an element of "green revenue" exposure. While this can be valuable, this approach fails to capture whether companies included in the index are transitioning in line with the 1.5°C objectives of the Paris Agreement. The S&P PACT Indices use forward-looking data and models from Trucost to assess the transition pathway of companies and increase exposure to companies with present and projected carbon emissions within their 1.5°C carbon budget.

  The essence of the London CIV Net Zero Strategy is to find the right balance between the decarbonization of funds in line with climate science for 1.5°C and driving real-world outcomes. Accordingly, we wanted to ensure that our selected index provided a realistic image of the real economy, including sectors that should actively reduce GHG emissions to make the objectives of the Paris Agreement attainable. In line with this objective, the index is constrained to maintain similar exposure to "high climate impact" revenue streams as its benchmark. The granularity of the Trucost revenue stream segmentation, which goes beyond just simple company-level classification, helps ensure that the index reflects the same revenues as the underlying index. This protects against the risk of greenwashing that prevails in many climate strategies, where the climate topic is limited to a display of a global reduction of carbon intensity without any connection to the real economy. In short, the S&P Developed Ex-Korea LargeMidCap Net Zero 2050 Paris-Aligned ESG Index actively supports the transition to a low-carbon economy by maintaining diversified sector exposure and leveraging the market-leading transition pathway dataset.

- **Inability to Adjust with Climate Developments — Ultimately Superseded by New Versions**
  Last but not least, members of the SIG wanted to ensure that the selected index was future proof against any developments in climate data. To this end, the S&P Developed Ex-Korea LargeMidCap Net Zero 2050 Paris-Aligned ESG Index is the most dynamic index that we've identified, as it intends to meet EU standards for PABs and innovation in underlying climate datasets. In addition, the indices leverage a combination of best-in-class, in-house data from Trucost and the S&P Global Corporate Sustainability Assessment (CSA), as well as data from leading providers like SBTi and Sustainalytics.

S&P DJI: What differentiates S&P Global Trucost data from other datasets in the market?

Jacqueline: There are three key differentiators that set S&P Global Trucost data apart from the rest.

- Trucost's underlying carbon data is one of the most comprehensive on the market, covering over 15,000 companies. Perhaps more importantly, the 464 Trucost sectors (based on revenue streams rather than company-level classifications) make for strong models in predicting Scope 3 emissions.
- Trucost Climate Change Physical Risk Analytics offer an asset-level approach to the assessment of physical risk.

– The Trucost Transition Pathway Model includes a climate budgeting element—something that few competitors include. This allows for a forward-looking understanding of companies that are transitioning, rather than simply iteratively reducing carbon intensity over time, and it allows overweighting of these companies.

S&P DJI: How do you think the weight attribution methodology may heighten corporate engagement and drive real-world impact?

Gustave: We fundamentally believe that index construction and stewardship activities should be mutually reinforcing in order to promote real-world emissions reductions.

- **Index construction** indirectly influences issuers to improve climate performance by linking funding conditions to levels of carbon intensity.
- **Engagement with issuers** influences them to improve climate performance through (direct/collective) dialogue or voting strategy.

During our review of the available indices, we found that the vast majority of low-carbon indices seek to minimize tracking error by using a risk model. With a risk model, the ESG data (e.g., carbon intensity) can be overshadowed by factor exposures (e.g., exposures to low volatility). This means that climate deteriorators can potentially gain an overweight over time, which is a concern from an engagement perspective. The S&P Developed Ex-Korea LargeMidCap Net Zero 2050 Paris-Aligned ESG Index does not use a risk model, which helps to alleviate this risk. The index is largely driven by the ESG data, which helps to translate climate objectives into investment decisions under clear and consistent terms. In turn, we can also leverage quarterly climate reporting and weight attribution analysis in order to drive our voting and engagement activities.

S&P DJI: How does the net zero concept factor into the investment strategy at LCIV?

Jacqueline: Climate change risk management is an important part of our fiduciary duty and is a strategic investment priority for our clients, 28 of which have declared a climate emergency and many have set net zero plans.

In October 2021, London CIV committed to net zero GHG emissions by 2040, becoming the first Local Authority pension pool to do so. Over the next few decades, one billion lives and trillions of British pounds will be at risk due to a single issue: climate change. We hope by setting this ambitious target, we will send a clear signal to our clients, managers, and investee companies about our commitment to addressing this increasingly material issue with the urgency required.

Our net zero strategy commitment is focused on ensuring that the range of funds we offer are suitable for our clients' varying climate goals. We want to ensure that in collaboration with all our partners, we can help client funds achieve their emissions reduction targets, however ambitious they may be. The launch of the LCIV Fund driven by the S&P Developed Ex-Korea LargeMidCap Net Zero 2050 Paris-Aligned ESG Index further increases our offering of net zero-aligned funds.

The S&P Developed Ex-Korea LargeMidCap Net Zero 2050 Paris Aligned ESG Index is proprietary to S&P Dow Jones Indices. London LGPS CIV Ltd.'s fund based on the S&P Developed Ex-Korea LargeMidCap Net Zero 2050 Paris Aligned ESG Index is not managed, sponsored, endorsed, marketed or promoted by S&P DJI or its affiliates and neither S&P DJI nor its affiliates have any liability with respect thereto.