

**S&P Paris-Aligned & Climate  
Transition (PACT) Select Indices  
*Methodology***

July 2022

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# Introduction

## Index Objective

The S&P Net Zero 2050 Climate Transition Select Index Series and S&P Net Zero 2050 Paris-Aligned Select Index Series measure the equal weighted performance of a targeted number of eligible equity securities, drawn from an underlying index, that are selected from some of the largest float-adjusted market capitalization (FMC) companies to be collectively compatible with a 1.5°C global warming climate scenario<sup>1</sup> at the index level. The indices apply exclusions based on companies' involvement in specific business activities, performance against the principles of the United Nations' Global Compact (UNGC), and involvement in relevant ESG controversies, as defined in *Eligibility Criteria*.

## Highlights

The indices aim to meet the minimum standards for EU Climate Transition Benchmarks (EU CTBs) and EU Paris-aligned Benchmarks (EU PABs) under Regulation (EU) 2019/2089 amending Regulation (EU) 2016/1011<sup>2</sup>. The law proposes the definitions of minimum standards for the methodology of any 'EU Climate Transition' and 'EU Paris-Aligned' benchmark indices that would be aligned with the objectives of the Paris Agreement<sup>3</sup>, and addresses the risk of greenwashing.

Should a material change to the methodology be required as a consequence of any change made by the EU to the minimum standards for EU CTBs and/or EU PABs, S&P Dow Jones Indices will issue an announcement before the change is implemented (and in these circumstances, S&P Dow Jones Indices would not conduct a formal consultation). For clarity, any other methodology change will follow S&P Dow Jones Indices' standard processes, which may include a consultation.

The index has the following key features:

- companies are selected based on FMC;
- reduced overall greenhouse gas (GHG, expressed in CO<sub>2</sub> equivalents) emissions intensity compared to its respective underlying parent index by at least 30% for CTB indices and 50% for PAB indices;
- minimum self-decarbonization rate of GHG emissions intensity in accordance with the trajectory implied by the Intergovernmental Panel on Climate Change's (IPCC) most ambitious 1.5°C scenario, equating to at least 7% GHG intensity reduction on average per annum;
- exposure to sectors with high impact on climate change at least equivalent to its underlying index (to mitigate greenwashing)

All indices in the series feature the exclusion of companies from the underlying parent index with:

- involvement in controversial weapons and tobacco business activities
- non-compliant United Nations Global Compact (UNGC) principle violations
- involvement in relevant ESG controversies

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<sup>1</sup> A climate scenario of 1.5°C above preindustrial levels has been deemed important by the IPCC: Masson-Delmotte, V., Zhai, P., Pörtner, H. O., Roberts, D., Skea, J., Shukla, P. R. Waterfield, T. (2018). Global warming of 1.5°C. An IPCC Special Report on the impacts of global warming of 1.5°C. IPCC, available at <https://www.ipcc.ch/sr15/>.

<sup>2</sup> Pursuant to Articles 19(a)(2) and 19(b)(1) of Regulation (EU) 2019/2089, Commission Delegated Regulation (EU) 2020/1818 lays down the minimum standards for EU CTBs and EU PABs <https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX:32020R1818>.

<sup>3</sup> UNFCCC. (2015). The Paris Agreement: <https://unfccc.int/process-and-meetings/the-paris-agreement/the-paris-agreement>.

In addition to those listed above, the S&P Net Zero 2050 Paris-Aligned Select Index Series Index Series incorporates the further exclusion of companies whose revenues from coal, oil, or natural gas exploration or processing activities exceed defined thresholds, and electricity generation companies that exceed a stated revenues threshold.

### Climate-Related Data

**S&P Trucost Limited (Trucost) Data Used:** GHG Emissions and Sector Revenues.

For information on Trucost, please refer [here](#).

### Supporting Documents

This methodology is meant to be read in conjunction with supporting documents providing greater detail with respect to the policies, procedures and calculations described herein. References throughout the methodology direct the reader to the relevant supporting document for further information on a specific topic. The list of the main supplemental documents for this methodology and the hyperlinks to those documents is as follows:

Supporting Document	URL
S&P Dow Jones Indices' Equity Indices Policies & Practices Methodology	<a href="#">Equity Indices Policies &amp; Practices</a>
S&P Dow Jones Indices' Index Mathematics Methodology	<a href="#">Index Mathematics Methodology</a>
S&P Dow Jones Indices' Float Adjustment Methodology	<a href="#">Float Adjustment Methodology</a>
S&P Dow Jones Indices' Global Industry Classification Standard (GICS) Methodology	<a href="#">GICS Methodology</a>

The methodology is created by S&P Dow Jones Indices to achieve the aforementioned objective of measuring the underlying interest of each index governed by this methodology document. Any changes to or deviations from this methodology are made in the sole judgment and discretion of S&P Dow Jones Indices so that the index continues to achieve its objective.

The Benchmark Administrator for the indices under this methodology is S&P DJI Netherlands B.V.

# Eligibility Criteria

## Index Universe

At each rebalancing reference date, the following indices are constructed from an Eligible Universe consisting of the constituents of an underlying index, as defined below:

S&P Climate Transition Index Series	Underlying Index
S&P Eurozone 50 Net Zero 2050 Climate Transition Select Index	S&P Eurozone LargeCap
S&P France 20 Net Zero 2050 Climate Transition Select Index	S&P France LargeMidCap
S&P EuroUSAJapan 100 Net Zero 2050 Climate Transition Select Index	S&P Eurozone, U.S., and Japan LargeMidCap
S&P Transatlantic 50 Net Zero 2050 Climate Transition Select Index	S&P North America LargeMidCap and S&P Europe LargeMidCap

S&P Paris-Aligned Index Series	Underlying Index
S&P Eurozone 50 Net Zero 2050 Paris-Aligned Select Index	S&P Eurozone LargeCap
S&P France 20 Net Zero 2050 Paris-Aligned Select Index	S&P France LargeMidCap
S&P EuroUSAJapan 100 Net Zero 2050 Paris-Aligned Select Index	S&P Eurozone, U.S., and Japan LargeMidCap
S&P Transatlantic 50 Net Zero 2050 Paris-Aligned Select Index	S&P North America LargeMidCap and S&P Europe LargeMidCap
S&P EuropeUSAJapan Ex-UK 50 Net Zero 2050 Paris-Aligned Select Index	S&P North America LargeMidCap, S&P Europe Ex-UK LargeMidCap and S&P Japan LargeMidCap

For information on an underlying index, please refer to the respective index methodology, available at [www.spglobal/spdji.com](http://www.spglobal/spdji.com).

## Eligibility Factors

Companies in a respective underlying index must satisfy the following to be eligible for index inclusion:

### Listing.

- **S&P Eurozone 50 Net Zero 2050 Climate Transition and Paris-Aligned Select Indices, S&P France 20 Net Zero 2050 Climate Transition, and Paris-Aligned Select Indices:** be EUR-denominated.
- **S&P Transatlantic 50 Net Zero 2050 Climate Transition and Paris-Aligned Select Indices:** be listed on a North American or European exchange.
- **S&P EuroUSAJapan 100 Net Zero 2050 Climate Transition and Paris-Aligned Select Indices:**
  - be U.S.-domiciled and USD-denominated,
  - be Eurozone-domiciled and EUR-denominated, or
  - be Japan-domiciled and JPY-denominated.
- **S&P EuropeUSAJapan Ex-UK 50 Net Zero 2050 Paris-Aligned Select Index:**
  - be U.S.-domiciled and listed,

- be Europe ex-UK-domiciled and listed, or
- be Japan-domiciled and listed.

#### Liquidity.

- **S&P Eurozone 50 Net Zero 2050 Climate Transition and Paris-Aligned Select Indices, S&P France 20 Net Zero 2050 Climate Transition, and Paris-Aligned Select Indices, and S&P EuropeUSAJapan Ex-UK 50 Net Zero 2050 Paris-Aligned Select Index:** have at least a three-month Median Daily Value Traded (MDVT) of EUR €10 million.
- **S&P EuroUSAJapan 100 Net Zero 2050 Climate Transition and Paris-Aligned Select Indices, S&P Transatlantic 50 Net Zero 2050 Climate Transition and Paris-Aligned Select Indices:** have at least a three-month MDVT of US \$10 million.

#### Carbon Emissions Coverage.

- Have GHG Emissions data, as provided by Trucost<sup>4</sup>

#### Index Exclusions

At each rebalancing reference date, companies are excluded from the eligible universe as described below:

Exclusion Type	S&P Climate Transition Select Index Series	S&P Paris-Aligned Select Index Series
Exclusions Based on Business Activities	Applicable	Applicable
UNGC Principle Violation	Applicable	Applicable
Fossil Fuel Operations and Power Generation	Not Applicable	Applicable
Controversies: Media and Stakeholder Analysis	Applicable	Applicable

#### Exclusions Based on Business Activities

As of each rebalancing reference date, companies with the following specific business activities are excluded from the eligible universe:

Sustainalytics Product Involvement	Sustainalytics Category of Involvement and Description	Sustainalytics Involvement Proxy	S&P DJI Level of Involvement Threshold	S&P DJI Significant Ownership Threshold
Controversial Weapons: Tailor Made and Essential	Tailor Made and Essential: The company is involved in the core weapon system, or components/services of the core weapon system that are considered tailor-made and essential for the lethal use of the weapon.	NA	>0%	≥25%
Tobacco	Production: The company manufactures tobacco products.	Revenue	>0%	≥25%
	Related Products/Services: The company supplies tobacco-related products/services.		≥10%	≥25%
	Retail: The company derives revenues from the distribution and/or retail sale of tobacco products.		≥5%	≥25%

Level of Involvement refers to the company's direct exposure to such products, while Significant Ownership indicates where the company has indirect involvement via some specified level of ownership of a subsidiary company with involvement.

<sup>4</sup> The data should include all Scope 1, Scope 2, and Scope 3 (upstream and downstream) emissions.

These exclusions use business involvement datasets from Sustainalytics. Companies not covered by Sustainalytics are excluded from index inclusion.

Please refer to <http://www.sustainalytics.com> for more information.

### Exclusions Based on Sustainalytics' Global Standards Screening

Sustainalytics' Global Standards Screening (GSS) provides an assessment of a company's impact on stakeholders and the extent to which a company causes, contributes, or is linked to violations of international norms and standards. The basis of the GSS assessments is the United Nations (UN) Global Compact Principles. Information regarding related standards is also provided in the screening, including the Organization for Economic Co-operation and Development (OECD) Guidelines for Multinational Enterprises and the UN Guiding Principles on Business and Human Rights, as well as their underlying conventions. Sustainalytics classifies companies into the following three statuses:

- **Non-Compliant.** Classification given to companies that do not act in accordance with the UNGC principles and its associated standards, conventions, and treaties.
- **Watchlist.** Classification given to companies that are at risk of violating one or more principles, for which all dimensions for Non-Compliant status could not be established or confirmed.
- **Compliant.** Classification given to companies that act in accordance with the UNGC principles and its associated standards, conventions, and treaties.

As of each rebalancing reference date, companies classified as Non-Compliant, according to Sustainalytics, are ineligible for index inclusion. Companies not covered by Sustainalytics are excluded from index inclusion.

Please refer to <http://www.sustainalytics.com> for more information.

### Exclusions Based on Revenue Thresholds in Fossil Fuel Operations and Power Generation

As of each rebalancing reference date, companies considered for the PAB indices are excluded from the eligible universe if the sum of their revenues derived from the relevant Trucost sectors breach the following revenue thresholds:

Exclusion Type	Trucost Revenue Sectors	Revenue Threshold
Coal Exploration or Processing	Bituminous Coal and Lignite Surface Mining Bituminous Coal Underground Mining All Other Petroleum and Coal Products Manufacturing Pipeline Transportation	$\geq 1\%$
Oil Exploration or Processing	All Other Petroleum and Coal Products Manufacturing Crude Petroleum and Natural Gas Extraction Drilling Oil and Gas Wells Support Activities for Oil and Gas Operations Petroleum Lubricating Oil and Grease Manufacturing Mining and Oil and Gas Field Machinery Manufacturing Tar Sands Extraction Petroleum Refineries Petrochemical Manufacturing Pipeline Transportation	$\geq 10\%$
Natural Gas Exploration or Processing	Crude Petroleum and Natural Gas Extraction Drilling Oil and Gas Wells Support Activities for Oil and Gas Operations Mining and Oil and Gas Field Machinery Manufacturing Natural Gas Liquid Extraction Natural Gas Distribution Industrial Gas Manufacturing Pipeline Transportation	$\geq 50\%$

Exclusion Type	Trucost Revenue Sectors	Revenue Threshold
Power Generation	Coal Power Generation Petroleum Power Generation Natural Gas Power Generation Biomass Power Generation	≥ 50%

These exclusions use a sector revenues dataset from Trucost.

### Controversies Monitoring: Media and Stakeholder Analysis Overlay

In addition to the above, S&P Global uses RepRisk for daily filtering, screening, and analysis of ESG risk incidents and controversial activities related to companies within the indices.<sup>5</sup>

In cases where risks are presented, S&P Global releases a Media and Stakeholder Analysis (MSA), which includes a range of issues such as economic crime and corruption, fraud, illegal commercial practices, human rights issues, labor disputes, workplace safety, catastrophic accidents, and environmental disasters.

The Index Committee reviews constituents flagged by S&P Global's MSA for Environmental reasons to evaluate the potential impact of controversial company activities on the composition of the indices. If the Index Committee decides to remove a company in question, that company is ineligible for re-entry for one full calendar year, beginning with the subsequent rebalancing.

*For more information on RepRisk, please refer to [www.reprisk.com](http://www.reprisk.com). This service is not considered a direct contribution to the index construction process.*

### Multiple Classes of Stock

Each company is represented once by the Designated Listing. For more information regarding the treatment of multiple share classes, please refer to Approach B within the Multiple Share Classes section of the S&P Dow Jones Indices' Equity Indices Policies & Practices Methodology.

<sup>5</sup> RepRisk, an ESG data science company, leverages the combination of AI and machine learning with human intelligence to systematically analyze public information in 23 languages and identify material ESG risks. With daily data updates across 100+ ESG risk factors, RepRisk provides consistent, timely, and actionable data for risk management and ESG integration across a company's operations, business relationships, and investments.

# Index Construction

## Constituent Selection

**Target Count:** The target number of constituents for each index, selected from the underlying index, are:

Index	Target Count
S&P Eurozone 50 Net Zero 2050 Climate Transition Select Index	50
S&P Eurozone 50 Net Zero 2050 Paris-Aligned Select Index	50
S&P France 20 Net Zero 2050 Climate Transition Select Index	20
S&P France 20 Net Zero 2050 Paris-Aligned Select Index	20
S&P EuroUSAJapan 100 Net Zero 2050 Climate Transition Select Index	U.S. = 50 Eurozone = 40 Japan = 10
S&P EuroUSAJapan 100 Net Zero 2050 Paris-Aligned Select Index	U.S. = 50 Eurozone = 40 Japan = 10
S&P Transatlantic 50 Net Zero 2050 Climate Transition Select Index	North America = 20 Europe Ex-U.K. = 20 UK = 10
S&P Transatlantic 50 Net Zero 2050 Paris-Aligned Select Index	North America = 20 Europe Ex-U.K. = 20 U.K. = 10
S&P EuropeUSAJapan Ex-UK 50 Net Zero 2050 Paris-Aligned Select Index	U.S. = 25 Eurozone = 20 Japan = 5

**Carbon Intensity Target.** Carbon intensity targets are used in the index selection process. The Carbon Intensity (CI) of company  $i$ , as of the rebalancing reference date  $t$ , is defined by:

$$CI_{i,t} = \frac{GHG1_i + GHG2_i + GHG3_i}{EVIC_{i,t}}$$

where:

$GHG1_i$  = Scope 1 GHG emissions in tCO<sub>2e</sub> for the company  $i$

$GHG2_i$  = Scope 2 GHG emissions in tCO<sub>2e</sub> for the company  $i$

$GHG3_i$  = Scope 3 (upstream and downstream) GHG emissions<sup>6</sup> in tCO<sub>2e</sub> for the company  $i$

$EVIC_{i,t}$  = enterprise value including cash of the company  $i$  as at the rebalance reference date,  $t$

The Weighted Average Carbon Intensity of an index is defined by:

$$WACI = \sum w_{i,t} \times \frac{GHG1_i + GHG2_i + GHG3_i}{EVIC_{i,t}}$$

where:

$w_{i,t}$  = weight of the company  $i$  in the index as of the rebalancing reference date  $t$

<sup>6</sup> Scope 3 GHG emission have been included in the calculation of Carbon Intensity since the 'Anchor Date' of the indices. Prior to the 'Anchor Date' of the indices, carbon intensity has been calculated using only scope 1 and scope 2 GHG. Please see Appendix IV for details on the 'Anchor Date' of the indices.

This metric is calculated using the GHG emissions dataset provided by Trucost.

At each rebalancing date, each index's WACI must:

- Be 30% lower than the underlying index's weighted-average carbon intensity<sup>7</sup> for Climate Transition Benchmark (CTB) indices; and 50% lower than the underlying index's weighted-average carbon intensity for PAB indices – these are the '*Relative WACI Targets*'
- Be self-decarbonized to at least the level defined by its decarbonization trajectory target for the current rebalancing date, which is calculated using a 7% annual reduction rate (adjusted for EVIC inflation) from the Index Anchor Date<sup>8</sup> – the '*Decarbonization Trajectory WACI Target*'.<sup>9</sup>

Relative WACI Target	Decarbonization Trajectory WACI Target
$\leq \text{UnderlyingWACI} \times 70\% \times \text{Buffer}^*$ (CTB) $\leq \text{UnderlyingWACI} \times 50\% \times \text{Buffer}^*$ (PAB)	$\leq \text{AnchorWACI}^{**} \times \frac{(1-7\%)^{(q/4)}}{1+Inf} \times \text{Buffer}^*$ where: $q$ = number of quarterly rebalancings since index launch $Inf$ = Enterprise Value Including Cash (EVIC) growth of the underlying index since index Anchor Date.

\* The buffer is a constant, set at 95%.

\*\* The '*AnchorWACI*' is defined as, and imposed to be, the *UnderlyingWACI* x 70% at the Index Anchor Date for CTB indices, and the *UnderlyingWACI* x 50% at the Index Anchor Date for PAB indices.

To ensure that the WACI of the indices satisfies both constraints, the '*TargetWACI*' is defined as the minimum between the Relative WACI Target and the Decarbonization Trajectory WACI Target.

**Constituent Selection Calculation Process.** At each rebalancing, the target number of constituents are selected from the eligible constituents of the underlying universe by the following steps:

- 1) Classify the constituents in the underlying index are assigned a status of either 'High' or 'Low Climate Impact' based on their GICS Sub-Industry Group (See Appendix I).
- 2) Calculate the total weight of the constituents of the underlying index that belong to High Climate Impact Sectors (*HIW*):

$$\text{UniverseHIW} = \sum \text{weight}_i * \text{Climate Impact}_i \begin{cases} \text{High} & 1 \\ \text{Low} & 0 \end{cases}$$

where:

*UniverseHIW* = The total weight of constituents in the underlying index designated as belonging to a High Climate Impact Sector.

*weight<sub>i</sub>* = The index weight of constituent *i* in the underlying index.

*Climate Impact<sub>i</sub>* = The climate impact designation of constituent *i*.

- 3) Calculate the High Impact Target (HIT) number of stocks by:

- a. For single target count indices:

$$\text{HIT} = \text{roundup}(\text{UniverseHIW} * \text{TargetCount})$$

where:

<sup>7</sup> Defined as '*UnderlyingWACI*'.

<sup>8</sup> The '*Index Anchor Date*' is the date of the reference index composition and base carbon intensity calculation used to determine the index's decarbonization trajectory. It is the rebalancing reference date for the most recent index rebalancing prior to the index's launch date. Please see Appendix IV for details on the '*Anchor Date*' of the indices.

<sup>9</sup> For more information on how the indices' decarbonization trajectories are calculated, please refer to Section 3.4 of the *S&P Paris-Aligned & Climate Transition (PACT™) Index Family Benchmark Statement*, available [here](#).

*HIT* = The count of constituents with a High Climate Impact designation the index will target in its selection process.

*TargetCount* = The target count of the index, as specified in the *Index Construction* chapter.

- b. **S&P EuroUSAJapan 100 Net Zero 2050 Climate Transition and Paris-Aligned Select Indices, S&P Transatlantic 50 Net Zero 2050 Climate Transition and Paris-Aligned Select Indices, and S&P EuropeUSAJapan Ex-UK 50 Net Zero 2050 Paris-Aligned Select Index:** The indices include specific target constituent counts for each region represented by the indices. Stocks are initially grouped into designated groups according to region of domicile, as defined by Target Count. The *HIT* for each individual group is calculated separately by:

$$HIT(group_i) = roundup(UniverseHIW * TargetCount(group_i))$$

- 4) Select the *HIT* count by selecting companies, ranked by FMC, among the eligible companies with “High Climate Impact” designation. For the indices with Multiple Stock Count Targets, this is done for each individual group.
- 5) Select the rest of the of the constituents until the target count is reached by including the largest FMC constituents from the eligible companies not selected in step 4 (irrespective of their impact sector classification). For the indices with Multiple Stock Count Targets, this is done for each individual group.
- 6) Calculate the weighted average carbon intensity of the selected constituents (*SelectedWACI*). The calculation is performed on the selection as a whole and not per region.

If  $SelectedWACI > TargetWACI$ , drop the stock with the largest CI among the selected stocks, then repeat steps 4, 5, and 6 until the  $SelectedWACI \leq TargetWACI$ . The process repeats iteratively until  $SelectedWACI \leq TargetWACI$ .

If  $SelectedWACI \leq TargetWACI$ , the stocks selected in step 5 become the constituents of each respective index.

- 7) **Single Target Count indices:** If in step 6, after excluding the stock with the largest CI, the number of eligible stocks drops below the Target Count, the Target Count for this rebalancing is decreased by one and the process resets and starts again from step 3. The process repeats iteratively until the constraints in step 6 are satisfied, provided the Target Count remains greater than or equal to the Minimum Count in the table below. If, after the minimum count is reached, the constraints still cannot be satisfied, no further relaxations will take place and the TargetWACI constraint will not be met.:

Index	Minimum Count
S&P Eurozone 50 Net Zero 2050 Climate Transition Select Index	40
S&P Eurozone 50 Net Zero 2050 Paris-Aligned Select Index	40
S&P France 20 Net Zero 2050 Climate Transition Select Index	16
S&P France 20 Net Zero 2050 Paris-Aligned Select Index	16

**S&P EuroUSAJapan 100 Net Zero 2050 Climate Transition and Paris-Aligned Select Indices, S&P Transatlantic 50 Net Zero 2050 Climate Transition and Paris-Aligned Select Indices, and S&P EuropeUSAJapan Ex-UK 50 Net Zero 2050 Paris-Aligned Select Index:** If in step 6, after excluding the stock with the largest CI the number of eligible stocks drops below the any of the individual Target Counts. The target counts are decreased by one as described in *Appendix V*. The process resets and starts again from step 3. The process repeats iteratively until the constraints in step 6 are satisfied, provided the Target Count remains greater than or equal to than the Regional Minimum Count in the table below. If, after the minimum count is reached, the constraints still cannot be satisfied, no further relaxations will take place and the TargetWACI constraint will not be met.:

Index	Regional Minimum Count
S&P EuroUSAJapan 100 Net Zero 2050 Climate Transition Select Index	U.S. = 40
	Eurozone = 32

Index	Regional Minimum Count
S&P EuroUSAJapan 100 Net Zero 2050 Paris-Aligned Select Index	Japan = 8
	U.S. = 40
	Eurozone = 32
	Japan = 8
S&P Transatlantic 50 Net Zero 2050 Climate Transition Select Index	North America = 16
	Europe Ex-UK = 16
	UK = 8
S&P Transatlantic 50 Net Zero 2050 Paris-Aligned Select Index	North America = 16
	Europe Ex-UK = 16
	UK = 8
S&P EuropeUSAJapan Ex-UK 50 Net Zero 2050 Paris-Aligned Select Index	North America = 20
	Europe Ex-UK = 16
	Japan = 4

### Constituent Weightings

At each rebalancing, constituents are equal weighted.

### Index Calculations

The indices calculate by means of the divisor methodology used in all S&P Dow Jones Indices' equity indices.

*For more information on the index calculation methodology, please refer to the Non-Market Capitalization Weighted Indices and Capped Market Capitalization Indices chapters, respectively, of S&P Dow Jones Indices' Index Mathematics Methodology.*

# Index Maintenance

## Rebalancing

The indices rebalance quarterly, effective after the close of the last business day of March, June, September, and December. The rebalancing reference date is the last trading day of the prior month.

As part of the rebalancing process, constituent stock weights are updated. Weights calculated as a result of the reference date data are implemented in the indices using closing prices seven business days prior to the rebalancing effective date. Since index shares are assigned based on prices prior to the rebalancing, the actual weight of each stock at the rebalancing will differ from these weights due to market movements.

## Additions and Deletions

**Additions.** Except for spin-offs, no stocks are added to the indices between rebalance dates. Spinoffs are added to all indices where the parent security is a constituent at a zero price at the market close of the day before the ex-date (with no divisor adjustment) and are removed after at least one day of regular way trading (with a divisor adjustment).

**Deletions.** If a stock is dropped from an underlying index, it is also removed from the respective S&P PACT Select Index simultaneously. Between rebalancings, a stock can be deleted from an index due to corporate events such as mergers, takeovers, delistings, suspensions, spin-offs/demergers, or bankruptcies.

In addition, at the discretion of the Index Committee, a deletion may occur if an MSA is raised.

## Ongoing Maintenance

Index constituents are drawn from the underlying index or component indices. Specific changes to index constituents, such as share changes, Investable Weight Factor (IWF) changes, dividend distributions, and price adjustments, follow the policies of the underlying index.

*For more information on Share Updates, Float Adjustment, and IWFs, please refer to S&P Dow Jones Indices' Equity Indices Policies & Practices Methodology and S&P Dow Jones Indices' Float Adjustment Methodology.*

The indices are reviewed on an ongoing basis to account for corporate events such as mergers, takeovers, delistings, suspensions, spin-offs/demergers, or bankruptcies. Changes to index composition and related weight adjustments are made as soon as they are effective. These changes are typically announced prior to the implementation date.

## Corporate Actions

For more information on Corporate Actions, please refer to the S&P Dow Jones Indices' Equity Indices Policies & Practices Methodology.

## Currency of Calculation and Additional Index Return Series

The indices calculate in euros and U.S. dollars.

WM/Refinitiv foreign exchange rates are taken daily at 04:00 PM London Time and used in the end-of-day calculation of the indices. These mid-market fixings are calculated by The WM Company based on Refinitiv data and appear on Refinitiv pages WMRA.

In addition to the indices detailed in this methodology, additional return series versions of the indices may be available, including, but not limited to the following: currency, currency hedged, decrement, fair value, inverse, leveraged, and risk control versions. For a list of available indices, please refer to the [S&P DJI Methodology & Regulatory Status Database](#).

For information on various index calculations, please refer to S&P Dow Jones Indices' Index Mathematics Methodology.

For the inputs necessary to calculate certain types of indices, including decrement, dynamic hedged, fair value, and risk control indices, please refer to the Parameters documents available at [www.spglobal/spdji.com](http://www.spglobal/spdji.com).

### Base Dates and History Availability

Index history availability, base dates, and base values are shown in the table below.

Index	Launch Date	First Value Date	Base Date	Base Value
S&P Eurozone 50 Net Zero 2050 Climate Transition Select Index	10/11/2021	12/31/2010	12/31/2010	1000
S&P Eurozone 50 Net Zero 2050 Paris-Aligned Select Index	10/11/2021	12/31/2010	12/31/2010	1000
S&P France 20 Net Zero 2050 Climate Transition Select Index	10/11/2021	12/31/2010	12/31/2010	1000
S&P France 20 Net Zero 2050 Paris-Aligned Select Index	10/11/2021	12/31/2010	12/31/2010	1000
S&P EuroUSAJapan 100 Net Zero 2050 Climate Transition Select Index	10/11/2021	12/31/2010	12/31/2010	1000
S&P EuroUSAJapan 100 Net Zero 2050 Paris-Aligned Select Index	10/11/2021	12/31/2010	12/31/2010	1000
S&P Transatlantic 50 Net Zero 2050 Climate Transition Select Index	01/31/2022	12/31/2010	12/31/2010	1000
S&P Transatlantic 50 Net Zero 2050 Paris-Aligned Select Index	01/31/2022	12/31/2010	12/31/2010	1000
S&P EuropeUSAJapan Ex-UK 50 Net Zero 2050 Paris-Aligned Select Index	07/11/2022	12/31/2010	12/31/2010	1000

# Index Data

## Calculation Return Types

S&P Dow Jones Indices calculates multiple return types which vary based on the treatment of regular cash dividends. The classification of regular cash dividends is determined by S&P Dow Jones Indices.

- Price Return (PR) versions are calculated without adjustments for regular cash dividends.
- Gross Total Return (TR) versions reinvest regular cash dividends at the close on the ex-date without consideration for withholding taxes.
- Net Total Return (NTR) versions, if available, reinvest regular cash dividends at the close on the ex-date after the deduction of applicable withholding taxes.

In the event there are no regular cash dividends on the ex-date, the daily performance of all three indices will be identical.

For a complete list of indices available, please refer to the daily index levels file (".SDL").

*For more information on the classification of regular versus special cash dividends as well as the tax rates used in the calculation of net return, please refer to S&P Dow Jones Indices' Equity Indices Policies & Practices Methodology.*

*For more information on the calculation of return types, please refer to S&P Dow Jones Indices' Index Mathematics Methodology.*

# Index Governance

## Index Committee

An S&P Dow Jones Indices Index Committee maintains the indices. The Index Committee meets regularly. At each meeting, the Index Committee reviews pending corporate actions that may affect index constituents, statistics comparing the composition of the index to the market, companies that are being considered as candidates for addition to the index, and any significant market events. In addition, the Index Committee may revise index policy covering rules for selecting companies, treatment of dividends, share counts or other matters.

S&P Dow Jones Indices considers information about changes to its indices and related matters to be potentially market moving and material. Therefore, all Index Committee discussions are confidential.

S&P Dow Jones Indices' Index Committees reserve the right to make exceptions when applying the methodology if the need arises. In any scenario where the treatment differs from the general rules stated in this document or supplemental documents, clients will receive sufficient notice, whenever possible.

In addition to the daily governance of indices and maintenance of index methodologies, at least once within any 12-month period, the Index Committee reviews the methodology to ensure the indices continue to achieve the stated objectives, and that the data and methodology remain effective. In certain instances, S&P Dow Jones Indices may publish a consultation inviting comments from external parties.

*For information on Quality Assurance and Internal Reviews of Methodology, please refer to S&P Dow Jones Indices' Equity Indices Policies & Practices Methodology.*

# Index Policy

## Announcements

All index constituents are evaluated daily for data needed to calculate index levels and returns. All events affecting the daily index calculation are typically announced in advance via the Index Corporate Events report (.SDE), delivered daily to all clients. Any unusual treatment of a corporate action or short notice of an event may be communicated via email to clients.

Press releases are posted on our Web site, [www.spglobal/spdji.com](http://www.spglobal/spdji.com), and are released to major news services.

## Pro-forma Files

In addition to the corporate events file (.SDE), S&P Dow Jones Indices provides constituent pro-forma files each time the indices rebalance. The pro-forma file is typically provided daily in advance of the rebalancing date and contains all constituents as well as their corresponding weights and index shares effective for the upcoming rebalancing.

*Please visit [www.spglobal/spdji.com](http://www.spglobal/spdji.com) for a complete schedule of rebalancing timelines and pro-forma delivery times.*

## Holiday Schedule

The indices calculate daily, throughout the calendar year. The only days an index is not calculated are on days when all exchanges where an index's constituents are listed are officially closed or if WM/Refinitiv exchange rates services are not published.

A complete holiday schedule for the year is available at [www.spglobal/spdji.com](http://www.spglobal/spdji.com).

## Rebalancing

The Index Committee may change the date of a given rebalancing for reasons including market holidays occurring on or around the scheduled rebalancing date. Any such change will be announced with proper advance notice where possible.

## Unexpected Exchange Closures

For information on Unexpected Exchange Closures, please refer to S&P Dow Jones Indices' Equity Indices Policies & Practices Methodology.

## Recalculation Policy

For information on the recalculation policy, please refer to S&P Dow Jones Indices' Equity Indices Policies & Practices Methodology.

*For information on Calculations and Pricing Disruptions, Expert Judgment and Data Hierarchy, please refer to S&P Dow Jones Indices' Equity Indices Policies & Practices Methodology.*

## Contact Information

For any questions regarding an index, please contact: [index\\_services@spglobal.com](mailto:index_services@spglobal.com).

# Index Dissemination

Index levels are available through S&P Dow Jones Indices' Web site at [www.spglobal/spdji.com](http://www.spglobal/spdji.com), major quote vendors (see codes below), numerous investment-oriented Web sites, and various print and electronic media.

## Tickers

The table below lists headline indices covered by this document. All versions of the below indices that may exist are also covered by this document. Please refer to the [S&P DJI Methodology & Regulatory Status Database](#) for a complete list of indices covered by this document.

Index	Return Type	Bloomberg	RIC
S&P Eurozone 50 Net Zero 2050 Climate Transition Select Index (EUR)	Price Return	SPELCEP	.SPELCEP
	Total Return	SPELCET	.SPELCET
	Net Total Return	SPELCEN	.SPELCEN
S&P Eurozone 50 Net Zero 2050 Paris-Aligned Select Index (EUR)	Price Return	SPEZLPEP	.SPEZLPEP
	Total Return	SPEZLPET	.SPEZLPET
	Net Total Return	SPEZLPEN	.SPEZLPEN
S&P France 20 Net Zero 2050 Climate Transition Select Index (EUR)	Price Return	SPFRXCEP	.SPFRXCEP
	Total Return	SPFRXCET	.SPFRXCET
	Net Total Return	SPFRXCEN	.SPFRXCEN
S&P France 20 Net Zero 2050 Paris-Aligned Select Index (EUR)	Price Return	SPFRXPEP	.SPFRXPEP
	Total Return	SPFRXPET	.SPFRXPET
	Net Total Return	SPFRXPEN	.SPFRXPEN
S&P EuroUSAJapan 100 Net Zero 2050 Climate Transition Select Index (EUR)	Price Return	SPEJXCEP	.SPEJXCEP
	Total Return	SPEJXCET	.SPEJXCET
	Net Total Return	SPEJXCEN	.SPEJXCEN
S&P EuroUSAJapan 100 Net Zero 2050 Paris-Aligned Select Index (EUR)	Price Return	SPEJXPEP	.SPEJXPEP
	Total Return	SPEJXPET	.SPEJXPET
	Net Total Return	SPEJXPEN	.SPEJXPEN
S&P Transatlantic 50 Net Zero 2050 Climate Transition Select Index (EUR)	Price Return	SPTCAPEP	.SPTCAPEP
	Total Return	SPTCAPET	.SPTCAPET
	Net Total Return	SPTCAPEN	.SPTCAPEN
S&P Transatlantic 50 Net Zero 2050 Paris-Aligned Select Index (EUR)	Price Return	SPTPAPEP	.SPTPAPEP
	Total Return	SPTPAPET	.SPTPAPET
	Net Total Return	SPTPAPEN	.SPTPAPEN
S&P EuropeUSAJapan Ex-UK 50 Net Zero 2050 Paris-Aligned Select Index (EUR)	Price Return	SPGPGDEP	.SPGPGDEP
	Total Return	SPGPGDET	.SPGPGDET
	Net Total Return	SPGPGDEN	.SPGPGDEN

## Index Data

Daily constituent and index level data are available via subscription.

For product information, please contact S&P Dow Jones Indices, [www.spglobal/spdji.com/contact-us](http://www.spglobal/spdji.com/contact-us).

## Website

For further information, please refer to S&P Dow Jones Indices' Web site at [www.spglobal/spdji.com](http://www.spglobal/spdji.com).

# Appendix I

## GICS Sub-Industry Climate Impact

The 'High Climate Impact' concept was introduced in the EU Technical Expert Group on Sustainable Finance's 2019 'TEG Final Report on Climate Benchmarks and Benchmarks' ESG Disclosures'<sup>10</sup> ('TEG Final Report') as the 'High Climate Impact Sectors' concept: Sectors of the economy that are key to the low-carbon transition. The TEG Final Report defines these as the following nine (of a total of 21) NACE Sections:

- Agriculture, Forestry and Fishing
- Mining and Quarrying
- Manufacturing
- Electricity, Gas, Steam and Air Conditioning Supply
- Water Supply; Sewerage, Waste Management and Remediation Activities
- Construction
- Wholesale and Retail Trade; Repair of Motor Vehicles and Motorcycles
- Transportation and Storage
- Real Estate Activities.

NACE sections are a statistical classification of economic activities used within the European community and are the subject of legislation at the EU level, which imposes the use of the classification uniformly within all the Member States.<sup>11</sup> For the purposes of this methodology, all NACE sections not assigned as 'High Climate Impact' are deemed 'Low Climate Impact'<sup>12</sup>.

EU Climate Transition Benchmarks ('EU CTBs') are required to ensure their exposure to High Climate Impact Sectors are at least as high as the level in their underlying index. The index achieves this at the index-level via its weighting approach, as explained in Constituent Weighting, facilitated by assigning each constituent a climate impact designation ('High' or 'Low'), based on GICS Sub-Industry, as shown in the table below. This is conducted by using a NACE-to-GICS mapping.<sup>13</sup>

### GICS Sub-Industry Climate Impact Designations

GICS Sub-Industry	GICS Code	Climate Impact	GICS Sub-Industry	GICS Code	Climate Impact
Oil & Gas Drilling	10101010	High	Food Distributors	30101020	High
Oil & Gas Equipment & Services	10101020	High	Food Retail	30101030	High
Integrated Oil & Gas	10102010	High	Hypermarkets & Super Centers	30101040	High
Oil & Gas Exploration & Production	10102020	High	Brewers	30201010	High

<sup>10</sup> The EU Technical Expert Group on Sustainable Finance. (2019). TEG Final Report on Climate Benchmarks and Benchmarks' ESG Disclosures, available at [https://ec.europa.eu/info/files/190930-sustainable-finance-teg-final-report-climate-benchmarks-and-disclosures\\_en](https://ec.europa.eu/info/files/190930-sustainable-finance-teg-final-report-climate-benchmarks-and-disclosures_en)

<sup>11</sup> Eurostat (2008). NACE Rev.2; Statistical classification of economic activities in the European Community. Available via : <https://ec.europa.eu/eurostat/documents/3859598/5902521/KS-RA-07-015-EN.PDF>.

<sup>12</sup> 'Low Climate Impact' companies referred to elsewhere in this methodology as 'non-High Climate Impact' companies.

<sup>13</sup> S&P & MSCI in The EU Technical Expert Group on Sustainable Finance. (2019). Handbook of Climate Transition Benchmarks, Paris-Aligned Benchmarks and Benchmarks' ESG Disclosures, available at [https://ec.europa.eu/info/sites/default/files/business\\_economy\\_euro/banking\\_and\\_finance/documents/192020-sustainable-finance-teg-benchmarks-handbook\\_en\\_0.pdf](https://ec.europa.eu/info/sites/default/files/business_economy_euro/banking_and_finance/documents/192020-sustainable-finance-teg-benchmarks-handbook_en_0.pdf)

GICS Sub-Industry	GICS Code	Climate Impact	GICS Sub-Industry	GICS Code	Climate Impact
Oil & Gas Refining & Marketing	10102030	High	Distillers & Vintners	30201020	High
Oil & Gas Storage & Transportation	10102040	High	Soft Drinks	30201030	High
Coal & Consumable Fuels	10102050	High	Agricultural Products	30202010	High
Commodity Chemicals	15101010	High	Packaged Foods & Meats	30202030	High
Diversified Chemicals	15101020	High	Tobacco	30203010	High
Fertilizers & Agricultural Chemicals	15101030	High	Household Products	30301010	High
Industrial Gases	15101040	High	Personal Products	30302010	High
Specialty Chemicals	15101050	High	Health Care Equipment	35101010	High
Construction Materials	15102010	High	Health Care Supplies	35101020	High
Metal & Glass Containers	15103010	High	Health Care Distributors	35102010	High
Paper Packaging	15103020	High	Health Care Services	35102015	Low
Aluminum	15104010	High	Health Care Facilities	35102020	Low
Diversified Metals & Mining	15104020	High	Managed Health Care	35102030	Low
Copper	15104025	High	Health Care Technology	35103010	Low
Gold	15104030	High	Biotechnology	35201010	Low
Precious Metals & Minerals	15104040	High	Pharmaceuticals	35202010	High
Silver	15104045	High	Life Sciences Tools & Services	35203010	High
Steel	15104050	High	Diversified Banks	40101010	Low
Forest Products	15105010	High	Regional Banks	40101015	Low
Paper Products	15105020	High	Thriffs & Mortgage Finance	40102010	Low
Aerospace & Defense	20101010	High	Other Diversified Financial Services	40201020	Low
Building Products	20102010	High	Multi-Sector Holdings	40201030	Low
Construction & Engineering	20103010	High	Specialized Finance	40201040	Low
Electrical Components & Equipment	20104010	High	Consumer Finance	40202010	Low
Heavy Electrical Equipment	20104020	High	Asset Management & Custody Banks	40203010	Low
Industrial Conglomerates	20105010	Low	Investment Banking & Brokerage	40203020	Low
Construction Machinery & Heavy Trucks	20106010	High	Diversified Capital Markets	40203030	Low
Agricultural & Farm Machinery	20106015	High	Financial Exchanges & Data	40203040	Low
Industrial Machinery	20106020	High	Mortgage REITs	40204010	Low
Trading Companies & Distributors	20107010	High	Insurance Brokers	40301010	Low
Commercial Printing	20201010	High	Life & Health Insurance	40301020	Low
Environmental & Facilities Services	20201050	High	Multi-line Insurance	40301030	Low
Office Services & Supplies	20201060	High	Property & Casualty Insurance	40301040	Low
Diversified Support Services	20201070	Low	Reinsurance	40301050	Low
Security & Alarm Services	20201080	Low	IT Consulting & Other Services	45102010	Low
Human Resource & Employment Services	20202010	Low	Data Processing & Outsourced Services	45102020	Low
Research & Consulting Services	20202020	Low	Internet Services & Infrastructure	45102030	Low
Air Freight & Logistics	20301010	High	Application Software	45103010	Low
Airlines	20302010	High	Systems Software	45103020	Low
Marine	20303010	High	Communications Equipment	45201020	High
Railroads	20304010	High	Technology Hardware, Storage & Peripherals	45202030	High
Trucking	20304020	High	Electronic Equipment & Instruments	45203010	High
Airport Services	20305010	High	Electronic Components	45203015	High
Highways & Railtracks	20305020	High	Electronic Manufacturing Services	45203020	High
Marine Ports & Services	20305030	High	Technology Distributors	45203030	High
Auto Parts & Equipment	25101010	High	Semiconductor Equipment	45301010	High
Tires & Rubber	25101020	High	Semiconductors	45301020	High
Automobile Manufacturers	25102010	High	Alternative Carriers	50101010	Low

<b>GICS Sub-Industry</b>	<b>GICS Code</b>	<b>Climate Impact</b>	<b>GICS Sub-Industry</b>	<b>GICS Code</b>	<b>Climate Impact</b>
Motorcycle Manufacturers	25102020	High	Integrated Telecommunication Services	50101020	Low
Consumer Electronics	25201010	High	Wireless Telecommunication Services	50102010	Low
Home Furnishings	25201020	High	Advertising	50201010	Low
Homebuilding	25201030	High	Broadcasting	50201020	Low
Household Appliances	25201040	High	Cable & Satellite	50201030	Low
Housewares & Specialties	25201050	High	Publishing	50201040	Low
Leisure Products	25202010	High	Movies & Entertainment	50202010	Low
Apparel, Accessories & Luxury Goods	25203010	High	Interactive Home Entertainment	50202020	Low
Footwear	25203020	High	Interactive Media & Services	50203010	Low
Textiles	25203030	High	Electric Utilities	55101010	High
Casinos & Gaming	25301010	Low	Gas Utilities	55102010	High
Hotels, Resorts & Cruise Lines	25301020	Low	Multi-Utilities	55103010	High
Leisure Facilities	25301030	Low	Water Utilities	55104010	High
Restaurants	25301040	Low	Independent Power Producers & Energy Traders	55105010	High
Education Services	25302010	Low	Renewable Electricity	55105020	High
Specialized Consumer Services	25302020	Low	Diversified REITs	60101010	High
Distributors	25501010	High	Industrial REITs	60101020	High
Internet & Direct Marketing Retail	25502020	High	Hotel & Resort REITs	60101030	High
Department Stores	25503010	High	Office REITs	60101040	High
General Merchandise Stores	25503020	High	Health Care REITs	60101050	High
Apparel Retail	25504010	High	Residential REITs	60101060	High
Computer & Electronics Retail	25504020	High	Retail REITs	60101070	High
Home Improvement Retail	25504030	High	Specialized REITs	60101080	High
Specialty Stores	25504040	High	Diversified Real Estate Activities	60102010	High
Automotive Retail	25504050	High	Real Estate Operating Companies	60102020	High
Homefurnishing Retail	25504060	High	Real Estate Development	60102030	High
Drug Retail	30101010	High	Real Estate Services	60102040	High

# Appendix II

## Indices in this Methodology Employing Backward Data Assumption

S&P Eurozone 50 Net Zero 2050 Climate Transition Select Index  
S&P Eurozone 50 Net Zero 2050 Paris-Aligned Select Index  
S&P France 20 Net Zero 2050 Climate Transition Select Index  
S&P France 20 Net Zero 2050 Paris-Aligned Select Index  
S&P EuroUSAJapan 100 Net Zero 2050 Climate Transition Select Index  
S&P EuroUSAJapan 100 Net Zero 2050 Paris-Aligned Select Index  
S&P Transatlantic 50 Net Zero 2050 Climate Transition Select Index  
S&P Transatlantic 50 Net Zero 2050 Paris-Aligned Select Index  
S&P EuropeUSAJapan Ex-UK 50 Net Zero 2050 Paris-Aligned Select Index

## Backward Data Assumption

The index employs a “Backward Data Assumption” method for some datapoints used in the derivation of historical index membership prior to the Live Data Effective Date (defined below). The “Backward Data Assumption” method involves applying the earliest available actual live data point for an index constituent to all prior, historical instances of that constituent in the index universe.

Backward Data Assumption affects only the historical, hypothetical constituents of any index back-test. Only actual live data is ever used in live index rebalancings and in the historical rebalancing calculation of an index after its Live Data Effective Date.

*For more information on S&P DJI’s principles and processes for using Backward Data Assumption, please refer to the [FAQ](#).*

## Designated Datasets Subject to Backward Data Assumption

The Backward Data Assumption within the historical back-test, with respect to the indices identified above, applies only to designated datasets and associated time horizons as defined below. For each designated dataset, all historical rebalancing events prior to the Live Data Reference Date listed below are subject to use of the Backward Data Assumption.

Data Provider	Designated Dataset	Live Data Reference Date	Live Data Effective Date
Sustainalytics	Business Activity Exclusions	02/28/2020	04/01/2020

The Live Data Reference Date refers to the first rebalancing reference date from which only actual live data is used.

The Live Data Effective Date refers to the first date from which index constituents are determined solely on actual live data for each respective dataset.

## Exclusions Based on Missing Coverage

This index excludes companies based on missing coverage with respect to the designated datasets above. However, for rebalancing dates prior to each respective Live Data Reference Date, the eligibility of

companies is determined based on the coverage after applying the Backward Data Assumption and is not dictated by actual live data coverage.

### Historical Coverage Assessment per Designated Dataset

**Sustainalytics Business Activity Exclusions Coverage** (with respect to underlying index universe):

#### S&P Eurozone 50 Net Zero 2050 Climate Transition and Paris-Aligned Select Indices:

Rebalancing Date	Underlying Index Stock Count	Point-in-Time Data		After Using the Data Assumption	
		Stock Count	Index Weight	Stock Count	Index Weight
2010	120	0	0.0%	118	99.9%
2011	125	0	0.0%	124	99.9%
2012	119	0	0.0%	117	99.9%
2013	132	119	96.7%	130	99.8%
2014	143	136	97.2%	142	99.9%
2015	151	145	99.7%	151	100.0%
2016	154	151	99.7%	154	100.0%
2017	148	147	99.8%	148	100.0%
2018	153	152	99.8%	153	100.0%
2019	137	136	99.9%	137	100.0%
2020	136	135	99.9%	n/a	n/a
2021	135	135	100.0%	n/a	n/a

#### S&P France 20 Net Zero 2050 Climate Transition and Paris-Aligned Select Indices:

Rebalancing Date	Underlying Index Stock Count	Point-in-Time Data		After Using the Data Assumption	
		Stock Count	Index Weight	Stock Count	Index Weight
2010	41	0	0.0%	40	98.8%
2011	45	0	0.0%	43	98.0%
2012	44	0	0.0%	42	97.5%
2013	44	42	98.0%	42	98.0%
2014	48	45	98.2%	46	98.2%
2015	49	48	99.8%	49	100.0%
2016	49	48	99.8%	49	100.0%
2017	50	50	100.0%	50	100.0%
2018	49	49	100.0%	49	100.0%
2019	46	46	100.0%	46	100.0%
2020	43	43	100.0%	n/a	n/a
2021	42	41	99.9%	n/a	n/a

#### S&P EuroUSAJapan 100 Net Zero 2050 Climate Transition and Paris-Aligned Select Indices:

Rebalancing Date	Underlying Index Stock Count	Point-in-Time Data		After Using the Data Assumption	
		Stock Count	Index Weight	Stock Count	Index Weight
2010	1128	0	0.0%	1106	99.7%
2011	1148	0	0.0%	1132	99.8%
2012	1114	0	0.0%	1104	99.8%
2013	1176	1087	98.0%	1166	99.8%
2014	1228	1162	98.5%	1221	99.9%
2015	1250	1204	99.3%	1247	100.0%
2016	1234	1195	99.6%	1234	100.0%
2017	1218	1200	99.8%	1218	100.0%
2018	1255	1242	99.8%	1255	100.0%
2019	1198	1183	99.6%	1193	100.0%
2020	1136	1130	100.0%	n/a	n/a
2021	1144	1138	100.0%	n/a	n/a

**S&P Transatlantic 50 Net Zero 2050 Climate Transition and Paris-Aligned Select Indices:**

Rebalancing Date	Underlying Index Stock Count	Point-in-Time Data		After Using the Data Assumption	
		Stock Count	Index Weight	Stock Count	Index Weight
2010	1089	0	0.0%	1057	99.2%
2011	1111	0	0.0%	1088	99.3%
2012	1047	0	0.0%	1031	99.3%
2013	1105	1021	97.1%	1088	99.4%
2014	1136	1073	97.6%	1124	99.5%
2015	1152	1113	99.0%	1146	99.7%
2016	1146	1114	99.6%	1145	100.0%
2017	1109	1093	99.8%	1108	100.0%
2018	1137	1122	99.8%	1136	100.0%
2019	1079	1063	99.6%	1073	99.9%
2020	1032	1025	99.9%	n/a	n/a
2021	1075	1069	99.9%	n/a	n/a

**S&P EuropeUSAJapan Ex-UK 50 Net Zero 2050 Paris-Aligned Select Index:**

Rebalancing Date	Underlying Index Stock Count	Point-in-Time Data		After Using the Data Assumption	
		Stock Count	Index Weight	Stock Count	Index Weight
2010	1232	0	0.0%	1206	99.6%
2011	1256	0	0.0%	1238	99.8%
2012	1206	0	0.0%	1196	99.8%
2013	1270	1168	97.7%	1260	99.8%
2014	1311	1247	98.2%	1304	99.9%
2015	1340	1298	99.3%	1337	100.0%
2016	1344	1303	99.6%	1344	100.0%
2017	1323	1306	99.8%	1323	100.0%
2018	1361	1346	99.8%	1361	100.0%
2019	1309	1293	99.6%	1303	100.0%
2020	1259	1253	100.0%	n/a	n/a
2021	1276	1270	99.9%	n/a	n/a

Coverage for each Sustainability Category of Involvement may differ due to the initiation of coverage for each sub-dataset. Actual live data coverage for each sub-dataset is therefore zero before its respective Coverage Initiation Date provided below:

Sustainability Category of Involvement	Coverage Initiation Date
Controversial Weapons: Tailor-made and Essential	12/31/2012
Controversial Weapons: Significant ownership (Tailor-made and Essential)	12/31/2018
Tobacco: Production	12/31/2012
Tobacco: Related Products/Services	12/31/2012
Tobacco: Retail	12/31/2012
Tobacco: Significant ownership (production)	12/31/2018
Tobacco: Significant ownership (related products/services)	12/31/2018
Tobacco: Significant ownership (retail)	12/31/2018

# Appendix III

## Index Anchor Date of Decarbonization Trajectory

The index 'Anchor Date' is the date of the reference index composition and base carbon intensity calculation used to determine the index's decarbonization trajectory. It is the rebalancing reference date for the most recent index rebalancing prior to the index's launch date.

Prior to the index 'Anchor Date' rebalancing reference date for the first index is used to determine the index's decarbonization trajectory.

Index	First Value Date	Anchor Date	Launch Date
S&P Eurozone 50 Net Zero 2050 Climate Transition Select Index	01/01/2011	08/31/2021	10/11/2021
S&P Eurozone 50 Net Zero 2050 Paris-Aligned Select Index	01/01/2011	08/31/2021	10/11/2021
S&P France 20 Net Zero 2050 Climate Transition Select Index	01/01/2011	08/31/2021	10/11/2021
S&P France 20 Net Zero 2050 Paris-Aligned Select Index	01/01/2011	08/31/2021	10/11/2021
S&P EuroUSAJapan 100 Net Zero 2050 Climate Transition Select Index	01/01/2011	08/31/2021	10/11/2021
S&P EuroUSAJapan 100 Net Zero 2050 Paris-Aligned Select Index	01/01/2011	08/31/2021	10/11/2021
S&P Transatlantic 50 Net Zero 2050 Climate Transition Select Index	01/01/2011	11/30/2021	01/31/2022
S&P Transatlantic 50 Net Zero 2050 Paris-Aligned Select Index	01/01/2011	11/30/2021	01/31/2022
S&P EuropeUSAJapan Ex-UK 50 Net Zero 2050 Paris-Aligned Select Index	01/01/2011	06/30/2022	07/11/2022

## Appendix IV

### S&P EuroUSAJapan 100 Net Zero 2050 Climate Transition and Paris-Aligned Select Indices Target Count Decrease

If the weighted-average carbon intensity (WACI) target is not achievable with the target counts stipulated per region, the process is re-initiated with a lower target count, as indicated below. The target count reduction repeats iteratively until the WACI target is met.

Index	U.S.	Eurozone	Japan
Targets	50	40	10
Step 1	49	40	10
Step 2	49	39	10
Step 3	48	39	10
Step 4	48	38	10
Step 5	47	38	10
Step 6	47	37	10
Step 7	46	37	10
Step 8	45	37	10
Step 9	45	36	10
Step 10	45	36	9
Step 11	44	36	9
Step 12	44	35	9
Step 13	43	35	9
Step 14	43	34	9
Step 15	42	34	9
Step 16	42	33	9
Step 17	41	33	9
Step 18	40	33	9
Step 19	40	32	9
Step 20	40	32	8

### S&P Transatlantic 50 Net Zero 2050 Climate Transition and Paris-Aligned Select Indices Target Count Decrease

If the weighted-average carbon intensity (WACI) target is not achievable with the target counts stipulated per region, the process is re-initiated with a lower target count, as indicated below. The target count reduction repeats iteratively until the WACI target is met.

Index	North America	Europe Ex-U.K.	U.K.
Targets	20	20	10
Step 1	19	19	10
Step 2	19	19	9
Step 3	18	18	9
Step 4	17	17	9
Step 5	17	17	8
Step 6	16	16	8

### S&P EuropeUSAJapan Ex-UK 50 Net Zero 2050 Paris-Aligned Select Index Target Count Decrease

If the weighted-average carbon intensity (WACI) target is not achievable with the target counts stipulated per region, the process is re-initiated with a lower target count, as indicated below. The target count reduction repeats iteratively until the WACI target is met.

Index	North America	Europe Ex-U.K.	Japan
Targets	25	20	5
Step 1	24	20	5
Step 2	24	19	5
Step 3	23	19	5
Step 4	23	18	5
Step 5	22	18	5
Step 6	22	18	4
Step 7	22	17	4
Step 8	21	17	4
Step 9	21	16	4
Step 10	20	16	4

# Appendix VI

## EU Required ESG Disclosures

EXPLANATION OF HOW ENVIRONMENTAL, SOCIAL & GOVERNANCE (ESG) FACTORS ARE REFLECTED IN THE KEY ELEMENTS OF THE BENCHMARK METHODOLOGY <sup>14</sup>			
1.	Name of the benchmark administrator.	S&P DJI Netherlands B.V.	
2.	Underlying asset class of the ESG benchmark. <sup>15</sup>	Equity	
3.	Name of the S&P Dow Jones Indices benchmark or family of benchmarks.	<a href="#">S&amp;P Paris-Aligned &amp; Climate Transition (PACT) Index Family Benchmark Statement</a>	
4.	Do any of the indices maintained by this methodology take into account ESG factors?	Yes	
5.	If the response to (4) is “Yes,” the indices stated here take into account ESG factors.	For a list of the benchmarks within this family that take in account ESG factors, please refer to the <a href="#">S&amp;P DJI Methodology &amp; Regulatory Database</a> .	
6.	Where the response to (4) is ‘Yes’, the section below lists those ESG factors that are taken into account by the ESG indices governed by the methodology, including those ESG factors listed in Annex II to Delegated Regulation (EU) 2020/1816.		
6.a	List of environmental factors considered	<b>ESG Factor<sup>16</sup></b>	<b>S&amp;P DJI ESG Factor</b>
		Greenhouse gas (GHG) intensity of the benchmark.	Transition Risk Constraints: <i>Weighted-average Carbon Intensity (WACI) Target; 7% Decarbonization Trajectory WACI Target</i>
		Degree of exposure of the portfolio to the sectors listed in Sections A to H and Section L of Annex I to Regulation (EC) No 1893/2006 of the European Parliament and of the Council as a percentage of	Transition Risk Constraints: <i>‘High Climate Impact’ designations.</i>
			<b>Comment</b>
			Selection. For more information, please refer to the <i>Index Construction</i> chapter of the methodology.
			Selection. For more information, please refer to the <i>Index Construction</i> chapter of the methodology.

<sup>14</sup> The information contained in this Appendix is intended to meet the requirements of the European Union Commission Delegated Regulation (EU) 2020/1817 supplementing Regulation (EU) 2016/1011 of the European Parliament and of the Council as regards the minimum content of the explanation of how environmental, social and governance factors are reflected in the benchmark methodology.

<sup>15</sup> The ‘underlying assets’ are defined in European Union Commission Delegated Regulation (EU) 2020/1816 supplementing Regulation (EU) 2016/1011 of the European Parliament and of the Council as regards the explanation in the benchmark statement of how environmental, social and governance factors are reflected in each benchmark provided and published.

<sup>16</sup> ‘ESG factors’ are defined in Annex II of European Union Commission Delegated Regulation (EU) 2020/1816 supplementing Regulation (EU) 2016/1011 of the European Parliament and of the Council as regards the explanation in the benchmark statement of how environmental, social and governance factors are reflected in each benchmark provided and published.

<b>EXPLANATION OF HOW ENVIRONMENTAL, SOCIAL &amp; GOVERNANCE (ESG) FACTORS ARE REFLECTED IN THE KEY ELEMENTS OF THE BENCHMARK METHODOLOGY<sup>14</sup></b>			
	the total weight in the portfolio.		
	N/A	Fossil Fuel Operations and Power Generation	Exclusion. For more information, please refer to the <i>Eligibility Criteria</i> chapter of the methodology.
	N/A	Controversies Monitoring: Media and Stakeholder Analysis	Exclusion. For more information, please refer to the <i>Eligibility Criteria</i> chapter of the methodology.
<b>6.b</b> <b>List of social factors considered.</b>	International treaties and conventions, United Nations principles or, where applicable, national law used in order to determine what constitutes a 'controversial weapon'.	Business Activities: <i>Controversial Weapons</i>	Exclusion. For more information, please refer to the <i>Eligibility Criteria</i> chapter of the methodology.
	Weighted average percentage of benchmark constituents in the controversial weapons sector.	Business Activities: <i>Controversial Weapons</i>	Exclusion. For more information, please refer to the <i>Eligibility Criteria</i> chapter of the methodology.
	Weighted average percentage of benchmark constituents in the tobacco sector.	Business Activities: <i>Tobacco</i>	Exclusion. For more information, please refer to the <i>Eligibility Criteria</i> chapter of the methodology.
	Number of benchmark constituents subject to social violations (absolute number and relative divided by all benchmark constituents), as referred to in international treaties and conventions, United Nations principles and, where applicable, national law.	UNGC Non-Compliant Companies	Exclusion. For more information, please refer to the <i>Eligibility Criteria</i> chapter of the methodology.
	N/A	Controversies Monitoring: Media and Stakeholder Analysis	Exclusion. For more information, please refer to the <i>Eligibility Criteria</i> chapter of the methodology.
<b>6.c</b> <b>List of governance factors considered.</b>	N/A	Controversies Monitoring: Media and Stakeholder Analysis	Exclusion. For more information, please refer to the <i>Eligibility Criteria</i> chapter of the methodology.
<b>7.</b>	<b>Data and standards used.</b>		
<b>7.a</b>	<b>Data sources, verification, and quality of data.</b>	<p>The datasets are defined as either:</p> <ul style="list-style-type: none"> <li>- <u>Reported</u>: All data in the dataset are provided as disclosed by companies, or as stated in the public domain.</li> <li>- <u>Modeled</u>: All data are derived using a proprietary modelling process with only proxies used in the creation of the dataset.</li> <li>- <u>Reported and Modeled</u>: The dataset is either a mix of reported and Modeled data or is derived by the vendor using reported data/information in a proprietary scoring or determination process.</li> </ul> <p>The index methodology uses the following ESG datasets.</p>	
	<b>Data Source.</b>	<b>Dataset.</b>	
	<b>S&amp;P Trucost Limited (a part of S&amp;P Global)</b>	<p>This methodology uses several datasets provided by S&amp;P Trucost Limited:</p> <ul style="list-style-type: none"> <li>• Greenhouse gas emissions and emissions disclosure dataset (Reported and Modeled)</li> </ul>	

EXPLANATION OF HOW ENVIRONMENTAL, SOCIAL & GOVERNANCE (ESG) FACTORS ARE REFLECTED IN THE KEY ELEMENTS OF THE BENCHMARK METHODOLOGY <sup>14</sup>		
	(external data source)	<ul style="list-style-type: none"> <li>Trucost sector revenues dataset (Reported and Modeled)</li> </ul> <p><i>For more information on Trucost, please refer to Appendix I and <a href="http://www.trucost.com/">http://www.trucost.com/</a>.</i></p>
	<b>S&amp;P Global</b> (external data source)	<p>Media &amp; Stakeholder Analysis (Reported and Modeled) – S&amp;P Global uses RepRisk, a leading provider of business intelligence on environmental, social, and governance risks, for daily filtering, screening, and analysis of controversies related to companies within the indices. In cases where risks are presented, S&amp;P Global releases a Media and Stakeholder Analysis (MSA), which includes a range of issues such as economic crime and corruption, fraud, illegal commercial practices, human rights issues, labor disputes, workplace safety, catastrophic accidents, and environmental disasters. The Index Committee reviews constituents flagged by S&amp;P Global's MSA to evaluate the potential impact of controversial company activities on the composition of the indices. If a company is removed due to an MSA, that company is not eligible for re-entry into the index for one full calendar year, beginning with the subsequent rebalancing.</p> <p><i>For more information about S&amp;P Global's Media and Stakeholder Analysis, please refer to the MSA Methodology Guidebook, available via <a href="https://www.spglobal.com/esg/csa/csa-resources/csa-methodology">https://www.spglobal.com/esg/csa/csa-resources/csa-methodology</a>.</i></p>
	<b>Sustainalytics</b> (external data source)	<p>This methodology uses the following datasets provided by Sustainalytics, a global leader in sustainability research and analytics:</p> <ul style="list-style-type: none"> <li>Business Activities (Reported and Modeled) – Product involvement dataset</li> <li>Global Standards Screening (Reported and Modeled)</li> </ul> <p><i>For more information, please refer to <a href="http://www.sustainalytics.com">www.sustainalytics.com</a>.</i></p>
<b>7.b</b>	<b>Reference standards and index methodology.</b>	<p>Whilst there are no specific reference standards that apply to the data, where possible, S&amp;P DJI uses international sustainability disclosure frameworks such as, SASB, GRI, UN Global Compact and the recommendations of the Financial Stability Board's Task Force for Climate-related Financial Disclosures as published in the 2017 Final Report.</p>
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<b>Appendix first publication:</b>		<b>10/11/2021</b>

# Disclaimer

## Performance Disclosure/Back-Tested Data

S&P Dow Jones Indices defines various dates to assist our clients in providing transparency. The First Value Date is the first day for which there is a calculated value (either live or back-tested) for a given index. The Base Date is the date at which the index is set to a fixed value for calculation purposes. The Launch Date designates the date when the values of an index are first considered live: index values provided for any date or time period prior to the index's Launch Date are considered back-tested. S&P Dow Jones Indices defines the Launch Date as the date by which the values of an index are known to have been released to the public, for example via the company's public website or its data feed to external parties. For Dow Jones-branded indices introduced prior to May 31, 2013, the Launch Date (which, prior to May 31, 2013, was termed "Date of introduction") is set at a date upon which no further changes were permitted to be made to the index methodology, but that may have been prior to the Index's public release date.

Please refer to the methodology for the Index for more details about the index, including the manner in which it is rebalanced, the timing of such rebalancing, criteria for additions and deletions, as well as all index calculations.

Information presented prior to an index's launch date is hypothetical back-tested performance, not actual performance, and is based on the index methodology in effect on the launch date. However, when creating back-tested history for periods of market anomalies or other periods that do not reflect the general current market environment, index methodology rules may be relaxed to capture a large enough universe of securities to simulate the target market the index is designed to measure or strategy the index is designed to capture. For example, market capitalization and liquidity thresholds may be reduced. Back-tested performance reflects application of an index methodology and selection of index constituents with the benefit of hindsight and knowledge of factors that may have positively affected its performance, cannot account for all financial risk that may affect results and may be considered to reflect survivor/look ahead bias. Actual returns may differ significantly from, and be lower than, back-tested returns. Past performance is not an indication or guarantee of future results.

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