S&P Dow Jones Indices

A Division of S&P Global

S&P CTB and PAB Pathway Select Indices *Methodology*

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Table of Contents

Introduction

Index Objective

The S&P CTB Pathway Select Indices and S&P PAB Transition Pathway Select Indices 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 best 1.5ºC Climate Scenario Transition Pathway Budget-aligned companies to be collectively compatible with a 1.5ºC global warming climate scenario[1] at the index level. The indices apply exclusions based on companies' involvement in specific business activities, violations of the principles of the United Nations' Global Compact (UNGC), involvement in relevant ESG controversies, and the risk and sensitivity to the physical risks of climate change, as defined in *Eligibility Criteria*.

Highlights

Each S&P CTB Pathway Select Index is an EU Climate Transition Benchmark, and each S&P PAB Transition Pathway Select Index is an EU Paris-aligned Benchmark. 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[2]. The law prescribes minimum standards for the methodology of any index that is labelled an 'EU Climate Transition Benchmark' and for the methodology of any index that is labelled an 'EU Paris-Aligned Benchmark'. In the case of EU Climate Transition Benchmarks, these include a requirement that its underlying assets are selected, weighted or excluded in such a manner that the resulting benchmark portfolio is on a measurable, science-based and time-bound trajectory towards alignment with the objectives of the Paris Agreement[3]. In the case of EU Paris-aligned Benchmarks, this includes a requirement that the underlying assets be selected, weighted or excluded so that the resulting benchmark's portfolio's carbon emissions are aligned with the Paris Agreement objectives.

The indices have the following key features:

- companies are selected based on 1.5ºC Climate Scenario, with no or limited overshoot, Transition Pathway Budget Index Alignment;
- reduced overall greenhouse gas (GHG, expressed in CO_2 equivalents) emissions intensity compared to the underlying 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 1.5ºC scenario, with no or limited overshoot, 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 index with:

- involvement in specific business activities

[1] A climate scenario of 1.5ºC 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/.
[2] Pursuant to Articles 19a(2) and 19c(1) of Regulation (EU) 2016/2011, 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*.
[3] UNFCCC. (2015). The Paris Agreement: *https://unfccc.int/process-and-meetings/the-paris-agreement/the-paris-agreement*.

- non-compliance with UNGC principles
- involvement in relevant ESG controversies
- relatively high exposure to the physical risks of climate change.

S&P PAB Transition Pathway Select Indices. In addition to those listed above, these indices also exclude companies if revenues from coal, oil, or natural gas exploration or processing activities exceed the defined thresholds, and electricity generation companies that exceed the defined revenue threshold.

Climate-Related Data

S&P Trucost Limited (Trucost) Transition Pathway Model

The Trucost Transition Pathway approach is based on two models: the Sectoral Decarbonization Approach ("SDA") (Krabbe, et al., 2015)[4], and the Greenhouse Gas Emissions per unit of Value Added Approach ("GEVA") (Randers, 2012)[5], which are both recommended by the Science Based Targets Initiative (Science Based Targets Initiative, 2019).[6]

The approach allows for a forward-looking perspective on likely future greenhouse gas emissions and uses a carbon budget allocation method to allocate each company a total amount of carbon emissions per year. These allocations allow companies, as a collective, to be 1.5°C aligned provided their emissions remain within the allocation budgets.

The SDA approach is sector specific and is used for high emitting sectors.[7] The SDA uses carbon intensity based on sector specific measures of output. For example, the unit of output for iron and steel companies is "tCO_2 per ton crude steel". This allows an understanding of how carbon efficient companies are per unit of output. The SDA approach also sets carbon budgets for specific sectors as a whole, which allows some sectors to decarbonize more slowly where the opportunities for decarbonization are far lower. This is allowed by setting more aggressive targets for sectors with greater scope for decarbonization.

GEVA is applied to lower emitting or heterogeneous business activities. For GEVA, the unit of output used is gross profit. Companies have diverse business activities, most of which do not have distinct transition pathways defined in climate scenarios. For these companies, the methodology applies a contraction in carbon intensity principle under which a company should make emissions reductions. This is consistent with rates required for the overall economy, but from each company's unique base year emissions intensity.

Trucost's Physical Risk Data

Trucost's Physical Risk dataset[8] allows users to understand the risk and sensitivity of company assets to the physical risks of climate change. Climate modelling datasets and hazard models are overlaid with the asset locations of companies. Sensitivity analysis is carried out for each asset, to assess whether the company's operations would be affected by each specific physical risk, based on the asset type.[9]

These climate modelling datasets and hazard models have been created for each specific physical risk. Physical risk is judged by a score ranging between 1 and 100. The physical risks covered include; wildfire,

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[4] Krabbe, O., Linthorst, G., Blok, K., Crijns-Graus, W., van Vuuren, D., Höhne, N., Pineda, A. C. (2015). Aligning Corporate Greenhouse-Gas Emissions Targets with Climate Goals. Nature Climate Change.

[5] Randers, J. (2012). Greenhouse gas emissions per unit of value added ("GEVA") – A corporate guide to voluntary climate action. Journal Energy Policy.

[6] Science Based Targets Initiative. (2019, April). Science-Based Target Setting Manual, available at *https://sciencebasedtargets.org/wp-content/uploads/2017/04/SBTi-manual.pdf*.

[7] As referenced in section 5.7.2. of 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*.

[8] The 2050 High Climate Scenario is used.

[9] Lord. R, Bullock, S. Birt, M. (2019). 'Understanding Climate Risk at the Asset Level: The Interplay of Transition and Physical Risks'. *https://www.spglobal.com/marketintelligence/en/documents/sp-trucost-interplay-of-transition-and-physical-risk-report-05a.pdf*.

cold wave, heatwave, water stress, sea level rise, flood, and hurricanes. The index methodology uses a composite physical risk score that is an average of all physical risk indicators, weighted for company specific sensitivity to each physical risk type.

Other Trucost Data Used: GHG Emissions and Sector Revenues.

For information on Trucost's methodology, 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	Equity Indices Policies & Practices
S&P Dow Jones Indices' Index Mathematics Methodology	Index Mathematics Methodology
S&P Dow Jones Indices' Float Adjustment Methodology	Float Adjustment Methodology
S&P Dow Jones Indices' Global Industry Classification Standard (GICS) Methodology	GICS Methodology

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, each index universe is all constituents of the underlying index, as defined below:

Index	Underlying Index
S&P Eurozone 30 CTB Pathway Select Index	S&P Eurozone LargeCap

Index	Underlying Index
S&P Eurozone 30 PAB Transition Pathway Select Index	S&P Eurozone LargeCap

For information on an underlying index, please refer to the respective index methodology, available at www.spglobal.com/spdji/.

Eligibility Factors

As of each rebalancing reference date, companies in the index universe must satisfy the following to be eligible for index inclusion:

Listing.

- **S&P Eurozone 30 CTB Pathway and PAB Transition Pathway Select Indices**: must be EUR-denominated.

Liquidity.

- **S&P Eurozone 30 CTB Pathway and PAB Transition Pathway Select Indices**: must have a three-month Median Daily Value Traded (MDVT) of at least EUR €10 million.

Trucost Data Coverage. Companies must have the following datasets, as provided by Trucost:

- GHG Emissions[10]
- Physical Risk
- Transition Pathway

Multiple Share Classes. 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.

Index Exclusions

At each rebalancing reference date, exclude companies as described below:

Exclusion Type	S&P CTB Indices	S&P PAB Indices
Exclusions Based on Business Activities	Applicable	Applicable
UNGC Principle Violation	Applicable	Applicable

[10] The data must include all Scopes 1, 2, and 3 (upstream and downstream) emissions.

Exclusion Type	S&P CTB Indices	S&P PAB Indices
Fossil Fuel Operations and Power Generation	Not Applicable	Applicable
Controversies: Media and Stakeholder Analysis	Applicable	Applicable
Exclusions Based on Trucost's Physical Risk Score	Applicable	Applicable

Exclusions Based on Business Activities

As of each rebalancing reference date, exclude the following:

- companies without coverage
- companies involved in the following specific business activities, at the relevant level of involvement. Revenue is used as a proxy for all categories.

S&P Global Business Involvement	S&P Global Category of Involvement and Description	S&P DJI Level of Involvement Threshold	S&P DJI Significant Ownership Threshold
Controversial Weapons	**Customized Weapons**: The screen covers companies involved in the manufacturing of the components of a weapon. These components are intended solely for use in the production and are essential for the functioning of Anti-Personnel Mines, Biological and Chemical Weapons, Blinding Laser Weapons, Cluster Munitions, Depleted Uranium, Incendiary Weapons and Nuclear Weapons.	>0%	≥25%
Tobacco	**Production**: The screen covers companies involved in the manufacturing of tobacco	>0%	≥25%
	Related Products and Services: The screen covers companies that supply essential products/services for the tobacco industry.	≥10%	N/A
	Retail and Distribution: The screen covers companies involved in the retail and/or distribution of tobacco as part of their offerings.	≥5%	N/A

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.

For more information on the S&P Global Business Involvement Screens data set, please refer here.

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, exclude the following:

- companies without coverage
- companies classified as Non-Compliant

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

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

S&P PAB Transition Pathway Select Indices. As of each rebalancing reference date, exclude companies if the sum of revenues derived from the relevant Trucost sectors breach the following 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	≥ 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	≥ 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	≥ 50%
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: 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[11].

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 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, the company is ineligible for re-entry into the index for at least one full calendar year, beginning with the subsequent rebalancing.

[11] 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.

For more information on RepRisk, please refer to www.reprisk.com. This service is not considered a direct contribution to the index construction process.

Exclusions Based on Trucost's Physical Risk Score

At each rebalancing reference date, exclude companies with Physical Risk Scores greater than or equal to the Physical Risk Threshold. The Physical Risk Threshold is calculated as:

1) Rank companies meeting all the other eligibility criteria by 1.5ºC Climate Scenario Transition Pathway Budget Alignment Intensity.
2) Take the top $TargetCount$[12] companies.
3) The Physical Risk Threshold is calculated as the Top Decile Threshold of the Physical Risk Score of the companies taken in Step 2.

[12] Defined below

Index Construction

Constituent Selection

Target Constituent Count. Each index selects eligible constituents from the index universe and targets a specific constituent count:

Index	Target Count
S&P Eurozone 30 CTB Pathway Select Index	30
S&P Eurozone 30 PAB Transition Pathway Select Index	30

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_2e for the company i

$GHG2_i$ = Scope 2 GHG emissions in tCO_2e for the company i

$GHG3_i$ = Scope 3 (upstream and downstream) GHG emissions[13] in tCO_2e 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 (WACI)[14] 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*

At each rebalancing date, each index's WACI must conform to the following two requirements:

- Be lower than the underlying index's weighted-average carbon intensity. These are the *'Relative WACI Targets'*:
  - **S&P CTB Indices:** 30% lower
  - **S&P PAB Indices:** 50% lower
- 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[15] – the '*Decarbonization Trajectory WACI Target.*'[16]

[13] 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 B for details on the 'Anchor Date' of the indices.
14 Exclude companies without full GHG emissions coverage from the calculation.
[15] The 'Index Anchor Date' is the date of the reference index composition and base carbon intensity calculation used to determine the index's decarbonization trajectoryPlease see *Appendix B* for details on the 'Anchor Date' of the indices.
[16] 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.

Relative WACI Target	Decarbonization Trajectory WACI Target
≤ UnderlyingWACI × 70% × Buffer* (CTB) ≤ UnderlyingWACI × 50% × Buffer* (PAB)	$\leqslant$ AnchorWACI** × $\frac{(1-7\%)^\wedge(q/4)}{1+Inf}$ × Buffer* where: *q* = number of quarterly rebalancings since index anchor date *Inf* = Enterprise Value Including Cash (EVIC) growth of 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.

1.5ºC Climate Scenario Transition Pathway Budget Alignment Intensity

The 1.5ºC Climate Scenario Transition Pathway Budget Alignment Intensity is used in the index selection process. The budget alignment intensity of each company[17] is calculated as follows:

$$\frac{\mathrm{TPBA}_i}{\mathrm{EVIC}_\mathrm{i}}$$

where:

$TPBA_i$ = Transition Pathway Budget Alignment of the company i

$EVIC_i$ = enterprise value including cash of the company i

The TPBA of each company *i* is calculated as the sum of the difference between a company's carbon budget and emissions (either realized or predicted) both using history and future projections. A TPBA of 0 would be compatible with a 1.5ºC climate scenario, a budget below 0 would be compatible with better than a 1.5ºC climate scenario and a budget above 0 would not be compatible with a 1.5ºC climate scenario.

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

1) The constituents of the underlying index are assigned a status of either 'High' or 'Low Climate Impact' based on GICS Sub-Industry Group. Please see here for more details.

2) Calculate the total weight of the constituents of the underlying index that belong to High Climate Impact Sectors (HIW):

$$UniverseHIW = \sum weight_i * Climate\ Impact_i \begin{cases} High & 1 \\ Low & 0 \end{cases}$$

where:

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

$weight_i$ = The index weight of constituent *i* in the underlying index.

$Climate\ Impact_i$ = The climate impact designation of constituent *i.*

3) Calculate the count of constituents with a High Climate Impact designation the index will target in its selection process that belong to the High Impact Target (HIT):

[17] For history prior to March 2020, only the realized GHG data available at that point-in-time was used in the calculation of the Transition Pathway Budget Alignment (i.e., Predicted GHG was included from April 2020 onwards).

$HIT = roundup(UniverseHIW * TargetCount)$

where:

$TargetCount =$ The target count of the index, as specified in the *Target Count section*.

4) Select the HIT count by selecting companies with the lowest 1.5ºC Climate Scenario Transition Pathway Budget Alignment Intensity among the eligible companies with "High Climate Impact" designation.

5) Select the rest of the of the constituents until the target count is reached by including the lowest 1.5ºC Climate Scenario Transition Pathway Budget Alignment Intensity constituents from the eligible companies not selected in step 4 (irrespective of their impact sector classification).

6) Calculate the weighted average carbon intensity of the selected constituents ('$SelectedWACI$').

   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) 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* is decreased by one and the process restarts 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. If, after the minimum count is reached the constraints still cannot be satisfied, no further relaxations occur, and the *TargetWACI* constraint remains unmet.

Index	Minimum Count
S&P Eurozone 30 CTB Pathway Select Index	24
S&P Eurozone 30 PAB Transition Pathway Select Index	24

Constituent Weightings

At each rebalancing, each index equal weights constituents.

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 Weighted Indices sections, respectively, of S&P Dow Jones Indices' Index Mathematics Methodology.

Index Maintenance

Rebalancing

The indices rebalance quarterly, effective after the effective after the close of the third Friday of March, June, September, and December. The rebalancing reference date is the third Friday 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.

S&P Dow Jones Indices monitors UNGC compliance on best effort basis until the initial announcement of the rebalancing results. If a company's UNGC compliance status changes any time prior to the rebalancing results announcement and no longer qualifies for the index S&P Dow Jones Indices may, at its discretion, exclude the company in conjunction with the rebalancing.

Additions and Deletions

Additions. Except for spin-offs, no stocks are added to the indices between rebalance dates.

Spin-offs. 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, the stock is removed from the respective S&P CTB or S&P PAB index. 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

WMR foreign exchange rates are taken daily at 4:00 PM London time and used in the calculation of the indices. These mid-market fixings are calculated by WMR based on LSEG data and appear on LSEG pages.

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.com/spdji/.

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 30 CTB Pathway Select Index	01/24/2022	12/31/2016	12/31/2016	1000
S&P Eurozone 30 PAB Transition Pathway Select Index	01/24/2022	12/31/2016	12/31/2016	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 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.

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

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.com/spdji/ 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 WMR exchange rates services are not published.

A complete holiday schedule for the year is available at *www.spglobal.com/spdji/*.

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.

Index Dissemination

Index levels are available through S&P Dow Jones Indices' Web site at www.spglobal.com/spdji/, 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	BBG	RIC
S&P Eurozone 30 CTB Pathway Select Index (EUR)	Price Return Total Return Net Total Return	SPECTPEP SPECTPET SPECTPEN	.SPECTPEP .SPECTPET .SPECTPEN
S&P Eurozone 30 CTB Pathway Select Index (USD)	Price Return Total Return Net Total Return	SPECTPUP SPECTPUT SPECTPUN	.SPECTPUP .SPECTPUT .SPECTPUN
S&P Eurozone 30 PAB Transition Pathway Select Index (EUR)	Price Return Total Return Net Total Return	SPEPAPEP SPEPAPET SPEPAPEN	.SPEPAPEP .SPEPAPET .SPEPAPEN
S&P Eurozone 30 PAB Transition Pathway Select Index (USD)	Price Return Total Return Net Total Return	SPEPAPUP SPEPAPUT SPEPAPUN	.SPEPAPUP .SPEPAPUT .SPEPAPUN

Index Data

Daily constituent and index level data are available via subscription.

For product information, please contact S&P Dow Jones Indices, www.spglobal.com/spdji/en/contact-us.

Website

For further information, please refer to S&P Dow Jones Indices' Web site at www.spglobal.com/spdji/.

Appendix A

Indices in this Methodology Employing Backward Data Assumption

S&P Eurozone 30 CTB Pathway Select Index

S&P Eurozone 30 PAB Transition Pathway 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
Trucost	Physical Risk	02/28/2020	04/01/2020
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

Trucost Physical Risk Coverage (with respect to underlying index universe)**:**

S&P Eurozone 30 CTB Pathway and PAB Transition Pathway 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
2016	154	0	0.0%	151	98.7%
2017	148	0	0.0%	145	98.7%
2018	153	0	0.0%	152	99.8%
2019	137	0	0.0%	136	99.2%
2020	136	131	97.7%	n/a	n/a
2021	135	132	98.0%	n/a	n/a

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

S&P Eurozone 30 CTB Pathway and PAB Transition Pathway 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
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

Coverage for each Sustainalytics 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:

Sustainalytics 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 B

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 30 CTB Pathway Select Index	01/01/2017	11/30/2021	01/24/2022
S&P Eurozone 30 PAB Transition Pathway Select Index	01/01/2017	11/30/2021	01/24/2022

If there are significant changes in the calculation methodology for GHG emissions, the index's decarbonization trajectory will be re-anchored.

The GHG intensity is calculated using the same currency as the underlying assets of the benchmark.

Appendix C

Methodology Changes

Methodology changes since January 24, 2022, are as follows:

Change	Effective Date (After Close)	Methodology	
		Previous	**Updated**
Index Names S&P Eurozone 30 CTB Pathway Select Index and S&P Eurozone 30 PAB Transition Pathway Select Index	11/06/2025	Index names are: • S&P Eurozone 30 Net Zero 2050 Climate Transition Pathway Select Index • S&P Eurozone 30 Net Zero 2050 Paris-Aligned Transition Pathway Select Index	Index names are: • S&P Eurozone 30 CTB Pathway Select Index • S&P Eurozone 30 PAB Transition Pathway Select Index
Exclusions Based on Business Activities: Data Provider	06/21/2024	Sustainalytics provides the data for exclusions based on business activities.	S&P Global provides the data for exclusions based on business activities.
Rebalancing: All Indices	09/15/2023	The indices rebalance quarterly, effective after the close of the last business day of March, June, September, and December. The rebalancing reference date for each rebalance is the last trading day of the prior month.	The indices rebalance quarterly, effective after the close of the third Friday of March, June, September, and December. The rebalancing reference date for each rebalance is the third Friday of the prior month.

Appendix D

ESG Disclosures

<table>
<tr><th colspan="5">EXPLANATION OF HOW ENVIRONMENTAL, SOCIAL & GOVERNANCE (ESG) FACTORS ARE REFLECTED IN THE KEY ELEMENTS OF THE BENCHMARK METHODOLOGY[18]</th></tr>
<tr><td>1.</td><td>Name of the Benchmark Administrator.</td><td colspan="3">S&P DJI Netherlands B.V.</td></tr>
<tr><td>2.</td><td>Type of benchmark or family of benchmarks.[19]</td><td colspan="3">Equity</td></tr>
<tr><td>3.</td><td>Name of the S&P Dow Jones Indices benchmark or family of benchmarks.</td><td colspan="3">S&P Paris-Aligned & Climate Transition (PACT) Indices</td></tr>
<tr><td>4.</td><td>Does the benchmark methodology for the benchmark or family of benchmarks take into account ESG factors?</td><td colspan="3">Yes</td></tr>
<tr><td>5.</td><td>If the response to (4) is “Yes” the indices stated here, take into account ESG factors.</td><td colspan="3">For a list of the benchmarks within this family that take in account ESG factors, please refer to the S&P DJI Methodology & Regulatory Database.</td></tr>
<tr><td>6.</td><td colspan="4">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.</td></tr>
<tr><td colspan="2" rowspan="2">6.a
List of Environmental factors considered</td><td><u>ESG Factor[20]</u></td><td><u>S&P DJI ESG Factor</u></td><td><u>Comment</u></td></tr>
<tr><td>Greenhouse gas (GHG) intensity of the benchmark.</td><td>Transition Risk Constraints: Weighted-average Carbon Intensity (WACI) Target; 7% Decarbonization Trajectory WACI Target</td><td>Selection. For more information, please refer to the ‘Index Construction’ section of the methodology.</td></tr>
</table>

[18] 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 and the retained EU law in the UK [The Benchmarks (amendment and Transitional Provision) (EU Exit) Regulations 2019].

[19] The “type of benchmark” refers to the type of ‘underlying asset’, as selected from the list provided in Annex II to 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.

[20] ‘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.

EXPLANATION OF HOW ENVIRONMENTAL, SOCIAL & GOVERNANCE (ESG) FACTORS ARE REFLECTED IN THE KEY ELEMENTS OF THE BENCHMARK METHODOLOGY[18]			
	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 the total weight in the portfolio.	Transition Risk Constraints: '*High Climate Impact' designations.*	Selection. For more information, please refer to the *'Index Construction'* section of the methodology.
	Regulation (EU) 2020/1818. Article 12(1)(d): companies that derive 1 % or more of their revenues from exploration, mining, extraction, distribution or refining of hard coal and lignite.	Revenue Thresholds in Fossil Fuel Operations and Power Generation: *Coal Exploration or Processing*	Exclusion. For more information, please refer to the *'Eligibility Criteria'* section of the methodology. Note: This exclusion applies to Paris-Aligned Benchmarks only.
	Regulation (EU) 2020/1818. Article 12(1)(e): companies that derive 10 % or more of their revenues from the exploration, extraction, distribution or refining of oil fuels.	Revenue Thresholds in Fossil Fuel Operations and Power Generation: *Oil Exploration or Processing*	Exclusion. For more information, please refer to the *'Eligibility Criteria'* section of the methodology. Note: This exclusion applies to Paris-Aligned Benchmarks only.
	Regulation (EU) 2020/1818. Article 12(1)(f): companies that derive 50 % or more of their revenues from the exploration, extraction, manufacturing or distribution of gaseous fuels.	Revenue Thresholds in Fossil Fuel Operations and Power Generation: *Natural Gas Exploration or Processing*	Exclusion. For more information, please refer to the *'Eligibility Criteria'* section of the methodology. Note: This exclusion applies to Paris-Aligned Benchmarks only.
	Regulation (EU) 2020/1818. Article 12(1)(g): companies that derive 50 % or more of their revenues from electricity generation with a GHG intensity of more than 100 g CO2 e/kWh.	Revenue Thresholds in Fossil Fuel Operations and Power Generation: *Power Generation*	Exclusion. For more information, please refer to the *'Eligibility Criteria'* section of the methodology. Note: This exclusion applies to Paris-Aligned Benchmarks only.
	N/A	1.5ºC Climate Scenario Transition Pathway Budget Alignment Intensity	Selection. For more information, please refer to the *'Index Construction'* section of the methodology.
	N/A	Physical Risk Score	Exclusion. For more information, please refer to the *'Eligibility Criteria'* section of the methodology.
	Regulation (EU) 2020/1818. Article 12(2): companies that are found or estimated by them or by external data providers	Controversies Monitoring: Media and Stakeholder Analysis	Exclusion. For more information, please refer to the *'Eligibility Criteria'* section of the methodology.

EXPLANATION OF HOW ENVIRONMENTAL, SOCIAL & GOVERNANCE (ESG) FACTORS ARE REFLECTED IN THE KEY ELEMENTS OF THE BENCHMARK METHODOLOGY[18]			
	to significantly harm one or more of the environmental objectives referred to in Article 9 of Regulation (EU) 2020/852 of the European Parliament and of the Council (8), in accordance with the rules on estimations laid down in Article 13(2) of this Regulation		
6.b List of Social factors considered.	International treaties and conventions, United Nations principles or, where applicable, national law used in order to determine what constitutes a 'controversial weapon'.	Business Activities: *Controversial Weapons*	Exclusion. For more information, please refer to the *'Eligibility Criteria'* section of the methodology.
	Weighted average percentage of benchmark constituents in the controversial weapons sector. *Regulation (EU) 2020/1818. Article 12(1)(a): companies involved in any activities related to controversial weapons*	Business Activities: *Controversial Weapons*	Exclusion. For more information, please refer to the *'Eligibility Criteria'* section of the methodology.
	Weighted average percentage of benchmark constituents in the tobacco sector. *Regulation (EU) 2020/1818. Article 12(1)(b): companies involved in any activities related to controversial weapons*	Business Activities: *Tobacco*	Exclusion. For more information, please refer to the *'Eligibility Criteria'* section 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. *Regulation (EU) 2020/1818. Article 12(1)(c): companies that benchmark administrators find in violation of the*	Sustainalytics Global Standards Screening: *UNGG Non-Compliant Companies*	Exclusion. For more information, please refer to the *'Eligibility Criteria'* section of the methodology.

<table>
<tr><th colspan="5">EXPLANATION OF HOW ENVIRONMENTAL, SOCIAL & GOVERNANCE (ESG) FACTORS ARE REFLECTED IN THE KEY ELEMENTS OF THE BENCHMARK METHODOLOGY[18]</th></tr>
<tr><td colspan="2" rowspan="2"></td><td>United Nations Global Compact (UNGC) principles or the Organisation for Economic Cooperation and Development (OECD) Guidelines for Multinational Enterprises.</td><td></td><td></td></tr>
<tr><td>N/A</td><td>Controversies Monitoring: Media and Stakeholder Analysis</td><td>Exclusion. For more information, please refer to the 'Eligibility Criteria' section of the methodology.</td></tr>
<tr><td colspan="2">6.c
List of Governance factors considered.</td><td>N/A</td><td>Controversies Monitoring: Media and Stakeholder Analysis</td><td>Exclusion. For more information, please refer to the 'Eligibility Criteria' section of the methodology.</td></tr>
<tr><td>7.</td><td colspan="4">Data and standards used.</td></tr>
<tr><td>7.a</td><td>Data input: Data sources, verification, and quality of data.</td><td colspan="3">The datasets are defined as either:
- <u>Reported</u>: All data in the dataset are provided as disclosed by companies, or as stated in the public domain.
- <u>Modeled</u>: All data are derived using a proprietary modelling process with only proxies used in the creation of the dataset.
- <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.

The index methodology uses the following ESG datasets.</td></tr>
<tr><td>7.b</td><td><u>Data Source.</u></td><td colspan="3"><u>Dataset.</u></td></tr>
<tr><td rowspan="2"></td><td>S&P Trucost Limited (a part of S&P Global) (external data source)</td><td colspan="3">This methodology uses several datasets provided by S&P Trucost Limited:
• Greenhouse gas emissions and emissions disclosure dataset (Reported and Modeled)
• Trucost sector revenues dataset (Reported and Modeled)
• Transition pathway model dataset (Reported and Modeled)
• Physical risk scores dataset (Reported and Modeled)

For information on Trucost's methodology, please refer <u>here</u>.</td></tr>
<tr><td>S&P Global (external data source)</td><td colspan="3">Media & Stakeholder Analysis (Reported and Modeled) – S&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&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 will review constituents flagged by S&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.

For more information about S&P Global's Media and Stakeholder Analysis, please refer to the MSA Methodology Guidebook, available via <u>https://www.spglobal.com/esg/csa/csa-resources/csa-methodology</u>.</td></tr>
</table>

EXPLANATION OF HOW ENVIRONMENTAL, SOCIAL & GOVERNANCE (ESG) FACTORS ARE REFLECTED IN THE KEY ELEMENTS OF THE BENCHMARK METHODOLOGY[18]		
		S&P Global Business Involvement Screens (Reported and Modeled) – The dataset tracks the business activities, products and services that companies are involved in. The S&P Global Business Involvement Screens provide detailed assessments of common areas of investor concern pinpointing the precise level of involvement, from production to operations and distribution, to inform values-based investment strategies. *For more information about S&P Global's Business Involvement Screens, please refer to https://www.spglobal.com/esg/solutions/portfolio-analytics-business-involvement-analytics.*
	Sustainalytics (external data source)	This methodology uses the following datasets provided by Sustainalytics, a global leader in sustainability research and analytics: • Global Standards Screening (Reported and Modeled) *For more information, please refer to www.sustainalytics.com.*
7.c	**Verification and quality of data.**	The data quality process involves regular reviews of new data received, and includes comparison with previous data, outlier and error checks and escalation of suspect data to data vendors. S&P DJI also holds regular feedback sessions with data partners and vendors to share any quality concerns and to remedy any issues that are observed during data validations performed by the Global Data Management Team. In addition, all users of third-party data perform their own review of data used in the maintenance of indices. Many of the third-party data used by S&P DJI is reviewed against secondary and tertiary data sources for cross comparison and validation. Some more thematic or specific datasets may not have a comparable data source that can be used for comparison, but these datasets are still reviewed for internal consistency and self-comparison over time.
7.d	**Reference standards.**	Data is sourced from Trucost, which uses the following standards: • *Scopes 1 and 2*: the GHG Protocol Corporate Standard. • *Scope 3 (upstream & downstream)*: The Corporate Value Chain Standard, which is a supplement to the GHG Protocol specific to Scope 3.
Appendix latest update:		May 2025 – minor wording updates and addition of ESG Factors to ESG Appendix.
Appendix updates:		March 2024 – Changes to reflect methodology updates, effective June 2024 September 2023 – Added section 7c.
Appendix first publication:		January 2022

Disclaimer

Performance Disclosure/Back-Tested Data

Where applicable, S&P Dow Jones Indices and its index-related affiliates ("S&P DJI") defines various dates to assist our clients by 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 DJI 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. In addition, forks have not been factored into the back-test data with respect to the S&P Cryptocurrency Indices. For the S&P Cryptocurrency Top 5 & 10 Equal Weight Indices, the custody element of the methodology was not considered; the back-test history is based on the index constituents that meet the custody element as of the Launch Date. Also, the treatment of corporate actions in back-tested performance may differ from treatment for live indices due to limitations in replicating index management decisions. 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.

Typically, when S&P DJI creates back-tested index data, S&P DJI uses actual historical constituent-level data (e.g., historical price, market capitalization, and corporate action data) in its calculations. As ESG investing is still in early stages of development, certain datapoints used to calculate certain ESG indices may not be available for the entire desired period of back-tested history. The same data availability issue could be true for other indices as well. In cases when actual data is not available for all relevant historical periods, S&P DJI may employ a process of using "Backward Data Assumption" (or pulling back) of ESG data for the calculation of back-tested historical performance. "Backward Data Assumption" is a process that applies the earliest actual live data point available for an index constituent company to all prior historical instances in the index performance. For example, Backward Data Assumption inherently assumes that companies currently not involved in a specific business activity (also known as "product involvement") were never involved historically and similarly also assumes that companies currently involved in a specific business activity were involved historically too. The Backward Data Assumption allows the hypothetical back-test to be extended over more historical years than would be feasible using only actual data. For more information on "Backward Data Assumption" please refer to the FAQ. The methodology and factsheets of any index that employs backward assumption in the back-tested history will explicitly state so. The methodology will include an Appendix with a table setting forth the specific data points and relevant time period for which backward projected data was used. Index returns shown do not represent the results of actual trading of investable assets/securities. S&P DJI maintains the index and calculates the index levels and performance shown or discussed but does not manage any assets.

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