S&P Paris-Aligned Transition ESG Indices Consultation on Eligibility Requirements and Constraints – Results

AMSTERDAM, MAY 15, 2024: S&P Dow Jones Indices ("S&P DJI") conducted a consultation with market participants on potential changes to the S&P Western Europe Plus LargeMidCap 100 Paris-Aligned Transition ESG Index and the S&P 500 Paris-Aligned Transition ESG 100 Index. To ensure the indices continue to meet their objectives, and as a result of previously received feedback, S&P DJI is implementing the changes detailed below to the indices' eligibility requirements and constraints.

Eligibility Factors

S&P DJI is extending the existing data coverage requirement for all Sustainalytics and S&P Trucost Limited (Trucost) datasets to include all relevant Sustainable1 datasets.

Change	Methodology	
	Previous	**Updated**
Dataset Coverage	• Must be covered by all relevant Sustainalytics datasets. • Must be covered by all relevant Trucost datasets.	• Must be covered by all relevant Sustainalytics datasets. • Must be covered by all relevant Trucost datasets. • **Must be covered by all relevant Sustainable1 datasets.**

Exclusions Based on Business Activities

S&P DJI is introducing new exclusions for involvement in Oil & Gas activities, superseding the existing exclusions for Shale Energy, Oil Sands, and Arctic Oil & Gas Exploration.

Change	Methodology	
	Previous	**Updated**
Shale Energy: Extraction	Level of Involvement Threshold: **≥5%** Significant Ownership Threshold: N/A	--
Oil Sands: Extraction	Level of Involvement Threshold: **≥5%** Significant Ownership Threshold: N/A	--
Arctic Oil & Gas Exploration: Extraction	Level of Involvement Threshold: **≥5%** Significant Ownership Threshold: N/A	--
Oil & Gas: Production	--	Level of Involvement Threshold: **>0%** Significant Ownership Threshold: **≥10%**
Oil & Gas: Generation	--	Level of Involvement Threshold: **>0%** Significant Ownership Threshold: **≥10%**

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

S&P DJI is revising the existing exclusions for involvement in Oil Exploration or Processing, and Natural Gas Exploration or Processing.

Methodology		
Change	**Previous**	**Updated**
Oil Exploration or Processing	Revenue Threshold: **≥10%**	Revenue Threshold: **>0%**
Natural Gas Exploration or Processing	Revenue Threshold: **≥50%**	Revenue Threshold: **>0%**

Exclusions Based on New Thermal Coal Exploration, Extraction or Transportation Projects

S&P DJI is introducing additional exclusions for involvement in new Thermal Coal Expansion projects, utilizing data from Sustainable1's Business Involvement Screens.

Methodology		
Change	**Previous**	**Updated**
Coal Expansion: Mining	--	In-situ reserves value: >0%
Coal Expansion: Power Plants	--	Power Generation Capacity: >0%
Coal Expansion: Transport/Infrastructure	--	Capex: >0%

Exclusions based on Fossil Fuel Reserves

S&P DJI is introducing additional exclusions on companies with fossil fuel reserves, as measured by Trucost.

Methodology		
Change	**Previous**	**Updated**
Thermal Coal	--	2P Fossil Fuel Reserves[1]>0
Other (Non-Metallurgical) Coal	--	2P Fossil Fuel Reserves>0
Conventional and Unconventional Oil	--	2P Fossil Fuel Reserves>0
Natural Gas	--	2P Fossil Fuel Reserves>0
Shale Gas	--	2P Fossil Fuel Reserves>0
'Other' Oil and Gas	--	2P Fossil Fuel Reserves>0

Exclusions Based on Greenhouse Gas Emissions Intensity of Power Generating Companies

S&P DJI is excluding companies identified as 'Majority Power Generation Companies'[2], with electricity production carbon intensity exceeding a predefined threshold.

Methodology		
Change	**Previous**	**Updated**
Majority Power Generating Companies	--	$$\frac{GHG1_i}{Total\ Power\ Generation_i} > 207^3\ gCO_2e/kWh$$ where: $GHG1_i$ = Scope 1 GHG emissions in tCO2e for company i $Total\ Power\ Generation^4_i$ = The total power generated (GWh) by constituent i

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[1] 2P, or 'proven and probable' reserves, are those with more than a 50% probability level of being recovered.

[2] Majority Power Generation Companies are defined as those companies whose combined revenues from relevant Trucost Sectors is greater than or equal to 50%. Relevant Sectors: Coal Power Generation, Natural Gas Power Generation, Petroleum Power Generation, Biomass Power Generation, Nuclear Electric Power Generation, Landfill Gas Power Generation, Geothermal Power Generation, Wind Power Generation, Solar Power Generation, Hydroelectric Power Generation, Wave & Tidal Power Generation, and Other Electric Power Generation.

[3] Label ISR soutenu par les pouvoirs publics (2023). Appendix 7: Exclusions.
FR: https://www.lelabelisr.fr/wp-content/uploads/Referentiel-Label-ISR-dec23.pdf
EN: https://www.lelabelisr.fr/wp-content/uploads/EN_Referentiel-Label-ISR-mars24.pdf

[4] Total Power Generation is the combined total of the following data points: Coal Power Generation (GWh); Natura Gas Power Generation (GWh); LPG Power Generation (GWh); Petroleum Power Generation (GWh); LNG Power Generation (GWh); Wind Power Generation (GWh); Solar Power Generation (GWh); Biomass Power Generation (GWh); Geothermal Power Generation (GWh); Wave & Tidal Power Generation (GWh); Hydropower Power Generation (GWh); Nuclear Power Generation (GWh); Landfill Gas Power Generation (GWh); Other Power Generation (GWh).

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Exclusions Based on Sustainalytics ESG Risk Rating

S&P DJI is revising the exclusions based on Sustainalytics ESG Risk Rating.

	Methodology	
Change	**Previous**	**Updated**
Exclusions Based on Sustainalytics ESG Risk Rating	As of each rebalancing reference date, rank eligible securities by Sustainalytics ESG Risk Rating and exclude, by count, the highest ranked 20% of the total number of securities in the index universe.	As of each rebalancing reference date, exclude companies with a Sustainalytics ESG Risk Rating > 30.

Exclusions Based on S&P Global ESG Score

S&P DJI is introducing an additional exclusion based on S&P Global ESG Score.

	Methodology	
Change	**Previous**	**Updated**
Exclusions based on S&P Global ESG Score	--	As of each rebalancing reference date, the index verifies that at least 30% of the total index weight is excluded by application of the ESG-related exclusions relative to the underlying index after the non-ESG listing criteria are applied. If the 30% exclusion threshold is not met, the index identifies the sector with the least exclusions by weight and applies a single exclusion to remove the constituent with the worst S&P Global ESG Score from that sector. The process continues iteratively until the 30% target exclusion target is reached.
Exclusions based on S&P Global ESG Score and Sustainalytics ESG Risk Rating	--	The index verifies if at least 10% of the total index weight is excluded by ESG Risk Rating or S&P Global ESG Score. If the 10% exclusion threshold is not met, the index identifies the sector with the least exclusions by weight and applies a single exclusion to remove the constituent with the worst S&P Global ESG Score. The process continues iteratively until the 10% target exclusion target is reached.

Constituent Weightings

S&P DJI is revising the objective function by introducing an additional Capitalization Type requirement. The below tables outline the index-specific change.

S&P 500 Paris-Aligned Transition ESG 100 Index	
Previous	$Objective\ Function$ $$= \frac{1}{N}\sum_{i=1}^{N}\left(\frac{(Parent\ Weight_i - Optimized\ Weight_i)^2}{Parent\ Weight_i}\right)$$ $$+ \frac{1}{K}\sum_{k=1}^{K}\left(\frac{(Parent\ Sector\ Weight_k - Optimized\ Sector\ Weight_k)^2}{Parent\ Sector\ Weight_k}\right)$$

S&P 500 Paris-Aligned Transition ESG 100 Index	
Updated	*Objective Function* $$= \frac{1}{N}\sum_{i=1}^{N}\left(\frac{(Parent\ Weight_i - Optimized\ Weight_i)^2}{Parent\ Weight_i}\right)$$ $$+ \frac{1}{K}\sum_{k=1}^{K}\left(\frac{(Parent\ Sector\ Weight_k - Optimized\ Sector\ Weight_k)^2}{Parent\ Sector\ Weight_k}\right)$$ $$+ \frac{1}{J}\sum_{j=1}^{J}\left(\frac{(Parent\ Capitalization\ Type\ Weight_j - Optimized\ Capitalization\ Type\ Weight_j)^2}{Parent\ Capitalization\ Type\ Weight_j}\right)$$ *Note: The market capitalization type of the S&P 500 constituents is defined based on the S&P US BMI.*

S&P Western Europe Plus LargeMidCap 100 Paris-Aligned Transition ESG Index	
Previous	*Objective Function* $$= \frac{1}{N}\sum_{i=1}^{N}\left(\frac{(Parent\ Weight_i - Optimized\ Weight_i)^2}{Parent\ Weight_i}\right)$$ $$+ \frac{1}{K}\sum_{k=1}^{K}\left(\frac{(Parent\ Sector\ Weight_k - Optimized\ Sector\ Weight_k)^2}{Parent\ Sector\ Weight_k}\right)$$ $$+ \frac{1}{M}\sum_{j=1}^{M}\left(\frac{(Parent\ Country\ Weight_j - Optimized\ Country\ Weight_j)^2}{Parent\ Country\ Weight_j}\right)$$
Updated	*Objective Function* $$= \frac{1}{N}\sum_{i=1}^{N}\left(\frac{(Parent\ Weight_i - Optimized\ Weight_i)^2}{Parent\ Weight_i}\right)$$ $$+ \frac{1}{K}\sum_{k=1}^{K}\left(\frac{(Parent\ Sector\ Weight_k - Optimized\ Sector\ Weight_k)^2}{Parent\ Sector\ Weight_k}\right)$$ $$+ \frac{1}{M}\sum_{j=1}^{M}\left(\frac{(Parent\ Country\ Weight_j - Optimized\ Country\ Weight_j)^2}{Parent\ Country\ Weight_j}\right)$$ $$+ \frac{1}{J}\sum_{j=1}^{J}\left(\frac{(Parent\ Capitalization\ Type\ Weight_j - Optimized\ Capitalization\ Type\ Weight_j)^2}{Parent\ Capitalization\ Type\ Weight_j}\right)$$

where:

N = the number of companies selected

K = the number of sectors in the universe

M = the number of countries in the universe

J = the number of capitalization types in the universe

Optimization Constraints

S&P DJI is removing the existing Fossil Fuel Reserves constraint as the exclusion is superseded by the addition of a Fossil Fuel Free exclusion, revising the Diversification Absolute Max Company Weight constraint, removing the Diversification Relative Company Weight constraint, and introducing an additional constraint based on Near-Term Target Alignment.

Change	Methodology	
	Previous	**Current**
Fossil Fuel Reserves (FFR) Constraint	≤ 20% × FFR of underlying index	--
SBTi Near Term Target Alignment Constraint	--	≥ 40% of index weight must have an SBTi near-term target aligned with a 1.5C scenario, and,

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	Methodology	
Change	Previous	Current
		≥45% of High Climate Impact Sectors[5] weight within the index must have an SBTI near-term target aligned with a 1.5° C scenario
Diversification Absolute Max Company Weight	≤ max(10%, underlying company weight)	≤ max(18%, underlying company weight)
Diversification Relative Company Weight	± 5% from underlying index company weight	--

Constraint Relaxation Hierarchy

S&P DJI is revising the Constraint Relaxation Hierarchy.

	Methodology	
Change	Previous	Updated
Constraint Relaxation Hierarchy	If the optimization does not achieve a solution, each constraint in the hierarchy is relaxed in the order listed below and repeated, if necessary, until a solution is found. • Weighted-average Sustainalytics ESG Risk Rating • Diversification Absolute Max Stock Weight • Diversification Relative Stock Weight • Liquidity Max Stock Weight • Fossil Fuel Reserves • Green-to-Brown Revenue Share • 1.5ºC Climate Scenario Transition Pathway Budget Index Alignment If the optimization is not solved after relaxing all the above constraints, the following constraint is relaxed: • Number of Stocks Selected The following constraints are considered hard constraints and are not relaxed: • Weighted-average Carbon Intensity (WACI) Target • 7% Decarbonization Trajectory WACI Target • High Climate Impact Sectors Revenue Proportion • SBTi Near-Term Target Alignment	If the optimization does not achieve a solution, relax each constraint in the hierarchy, in the order listed below. The process continues iteratively until a solution is found. • Liquidity Max Stock Weight • Number of Stocks Selected • 1.5ºC Climate Scenario Transition Pathway Budget Index Alignment The following constraints are considered hard constraints and do not relax: • Weighted-Average Carbon Intensity (WACI) Target • 7% Decarbonization Trajectory WACI Target • High Climate Impact Sectors Revenue Proportion • Diversification Absolute Max Stock Weight • Near-Term Target Alignment • Green-to-Brown Revenue Share

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[5] Underlying index constituents are assigned a status of either 'High' or 'Low Climate Impact' based on GICS Sub-Industry Group. For more information on high/low climate impact, please see *here*.

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IMPLEMENTATION TIMING

S&P DJI will implement the previously described methodology changes in conjunction with the upcoming rebalancing, which takes effect prior to the market open on **Monday, June 24, 2024**. The changes will first be visible to clients beginning on **Friday June 14, 2024**.

Please note that the methodologies on S&P DJI's website are being updated to reflect these changes.

For more information about S&P Dow Jones Indices, please visit *www.spglobal.com/spdji*.

ABOUT S&P DOW JONES INDICES

S&P Dow Jones Indices is the largest global resource for essential index-based concepts, data and research, and home to iconic financial market indicators, such as the S&P 500® and the Dow Jones Industrial Average®. More assets are invested in products based on our indices than products based on indices from any other provider in the world. Since Charles Dow invented the first index in 1884, S&P DJI has been innovating and developing indices across the spectrum of asset classes helping to define the way investors measure and trade the markets.

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