A Deep Dive into Sustainability Sector Indices

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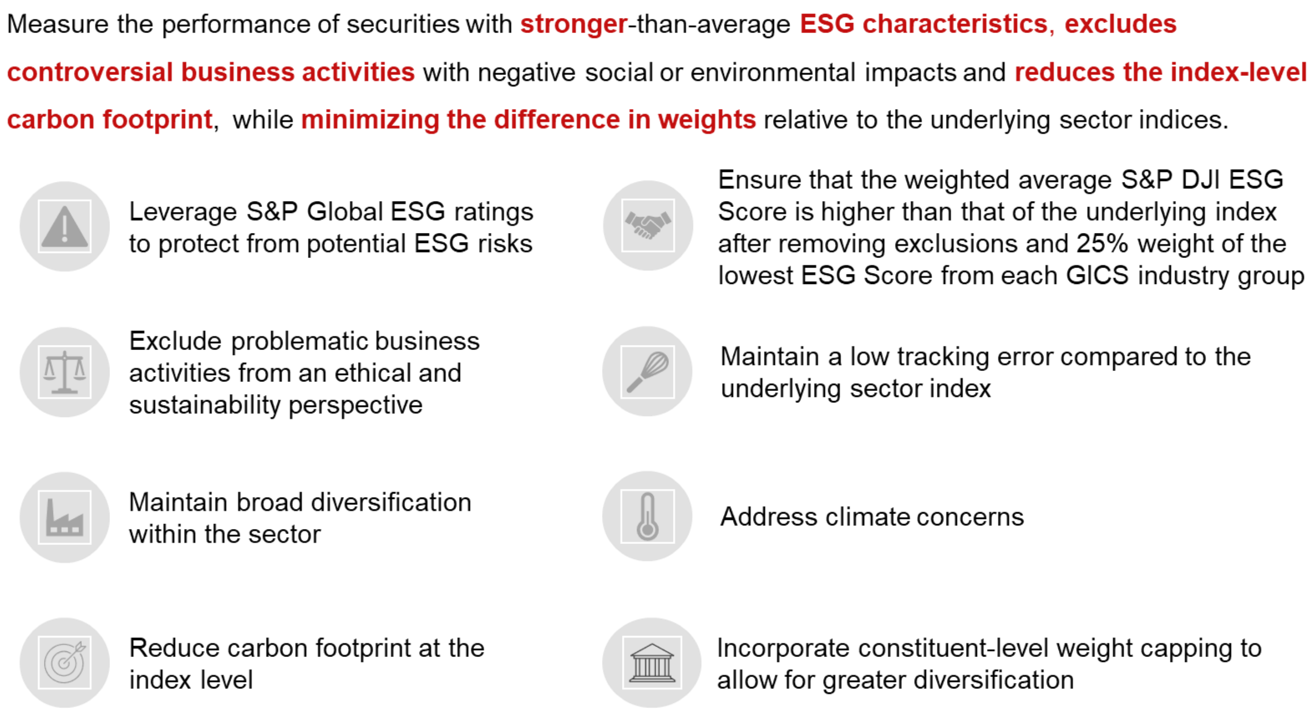
Introduction

Investing in sectors has grown dramatically over recent years, as investors look to express a view on the broader economic conditions while maintaining diversification and mitigating single-stock risk. Additionally, there has been an increase in market participants looking to allocate strategically to sustainability. Many are starting to look for ways to integrate sustainability values into their investments through more precise tools such as sector allocation.[1] S&P Dow Jones Indices (S&P DJI) has introduced a suite of sustainability sector indices, including the S&P ESG Enhanced Sector Indices and S&P Sustainability Enhanced Sector Indices, to meet this need. By utilizing S&P DJI ESG Scores, business activity exclusions, UN Global Compact (UNGC) exclusions, daily controversy monitoring and S&P Global Trucost carbon data, our sustainability sector indices have historically offered a meaningful improvement in ESG profile[2] and carbon emissions profile against their non-ESG underlying index.

[1] Source: Bloomberg. ESG as a percentage of ETF AUM within EMEA, as of April 28, 2023.

[2] See Beyhan, Maya, "The Best of Both Worlds: Sustainability in Sectors," Indexology® Blog, May 1, 2023. https://www.indexologyblog.com/2023/05/01/the-best-of-both-worlds-sustainability-in-sectors/

Exhibit 1: Objectives of Sustainability Sector Indices

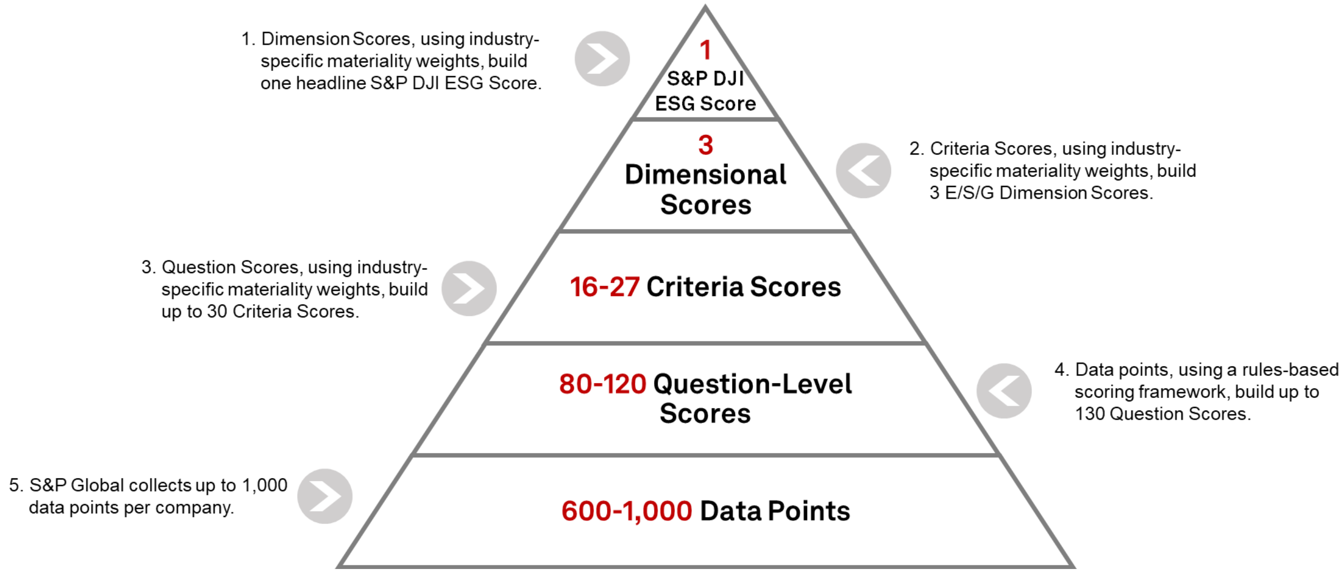


Source: S&P Dow Jones Indices LLC. Chart is provided for illustrative purposes.

S&P DJI ESG Scores

The S&P DJI ESG Scores are derived from over 22 years of detailed sustainability data from the industry leading sustainability assessment, the S&P Global Corporate Sustainability Assessment (CSA). The CSA is an annual evaluation of companies' sustainability practices. A key feature of the CSA is that, through optional active participation in the assessment, companies can disclose additional details to our analysts beyond what is publicly available. This engagement opportunity, coupled with the granularity of the CSA, enables S&P Global to provide a holistic and complete view of a company's sustainability profile; differentiating the S&P DJI ESG Scores from other ESG scores that rely solely on data from public sources. A company's active participation in the CSA allows S&P Global to collect between 600 and 1,000 data points per company, which feed into the S&P DJI ESG Scores (see Exhibit 2).

Exhibit 2: S&P DJI ESG Scores



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

The CSA and the derived S&P DJI ESG Scores are driven by materiality analysis considering both financial materiality and how sustainability criteria present a significant impact on society or the environment. Material sustainability criteria have the potential to significantly influence an entity's business value drivers, including, for example, business operations, cash flows, legal or regulatory liabilities and access to capital. Furthermore, sustainability criteria have the capability to significantly improve or undermine an entity’s reputation and relationships with key stakeholders and society, including the environment. Therefore, companies are assessed according to the sustainability issues that are weighted according to the magnitude and likelihood of their impact on enterprise value creation and external stakeholders, including the economy, the environment and people. Collecting and scoring data according to these factors ensures that companies have been measured based on the sustainability issues that are most relevant to them. The examples in Exhibit 3 show how weights assigned to issues in different industries can vary greatly.

Exhibit 3: Material Issues in Select Industries

Energy	Financials	Health Care	Information Technology
Energy Equipment & Services	Banks	Health Care Providers & Services	IT Services

Energy	Financials	Health Care	Information Technology
• Supply Chain Management • Business Ethics	• Sustainable Finance • Anti-Crime Policy & Measures	• Innovation Management • Business Ethics	• Information Security • Innovation Management
• Climate Strategy • Operational Eco-Efficiency	• Decarbonization Strategy • Climate Strategy	• Climate Strategy • Environmental Policy & Management Systems	• Environmental Reporting • Operational Eco-Efficiency
• Occupational Health & Safety • Labor Practice Indicators	• Financial Inclusion • Talent Attraction & Retention	• Access to Health Care • Occupational Health & Safety	• Customer Relationship Management • Privacy Protection

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

S&P Carbon Intensity Data

S&P Global Trucost provides robust environmental data on more than 16,800 companies.[3] Trucost's data and analysis provides insights relating to climate change, water use, waste disposal, fossil fuel exposure, land, water and air pollution and the over-exploitation of natural resources. With quantitative, robust and consistent environmental data, index methodologies can integrate carbon objectives to aid market participants with the ability to better manage their exposure to carbon.

Greenhouse gas (GHG) emissions are commonly framed using company revenue in a metric referred to as carbon intensity (CO_2e ton per USD 1 million of revenue). In short, entities with lower carbon intensity values generate less GHG emission per USD 1 million of revenue compared with entities with higher carbon intensity values. A weighted average carbon intensity (WACI) metric normalizes carbon intensity to account for company weight. This also allows for comparison across companies, industries and sectors.

[3] Source: S&P Global Trucost. Data as of Dec. 31, 2022.

There are several approaches to measuring the carbon intensity of a portfolio. The EU Regulation 2020/1818[4] stipulates that the carbon intensity of a company should be measured by dividing its GHG emissions by its enterprise value including cash (EVIC). When using EVIC as the denominator, it allows the ownership of carbon emissions to be apportioned across equity and bondholders per U.S. dollar invested.

Index Construction

Our sustainability sector indices have multiple objectives: to offer a meaningful sustainability improvement and emissions profile against their broad market underlying index (after any exclusions are made), to remain broad and diversified and to minimize deviations from the underlying index. To achieve these goals simultaneously, we have utilized an optimization process in the construction process.

S&P Glass-Box Optimizer

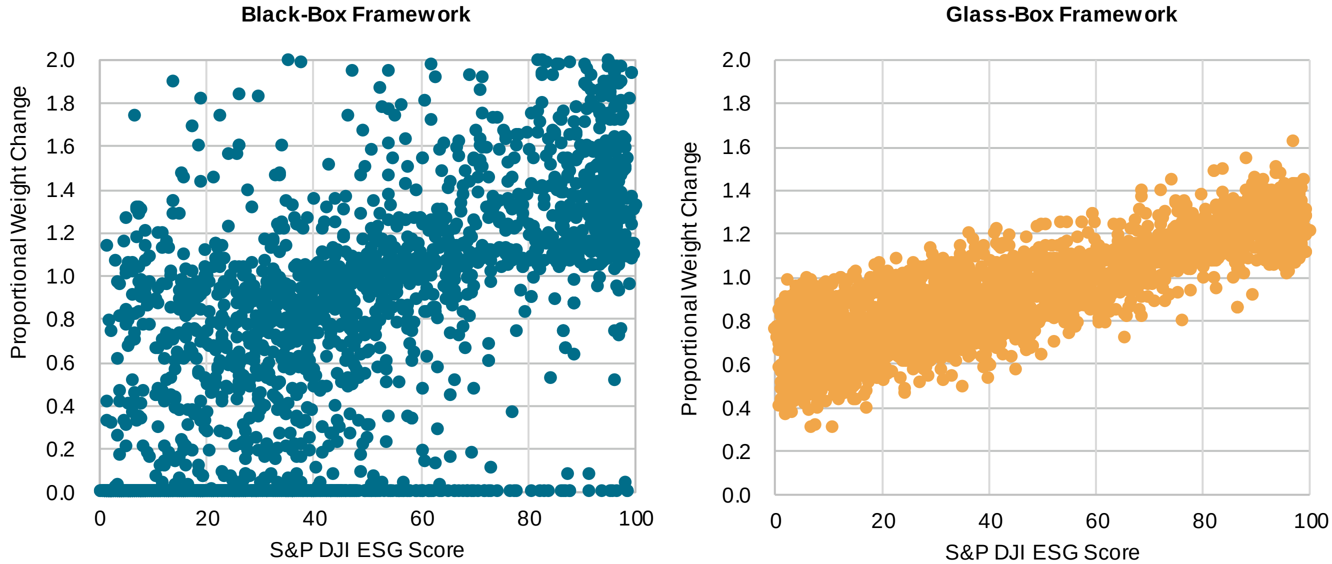
As an increasing number of sustainability datasets and climate-related objectives are incorporated into sustainability indices, there are often a variety of different objectives to meet. Sustainability objectives are commonly integrated through the index construction process, either through an iterative step-by-step process or through optimization. A mathematical optimization approach allows an index to integrate numerous different constraints through the objective function and resultingly indices can meet a range of different objectives simultaneously.

A benefit of non-risk model-based optimization is the aspect of the transparency. Where traditional risk-based optimization models seek to minimize tracking error by evaluating the index exposure to different sources of systematic risk, a risk-based optimization approach looks to minimize active share while integrating sustainability or carbon constraints. Another benefit of a non-risk-based optimization approach is that, as the index is trying to minimize the deviations from its underlying universe, any proportional changes in constituent weights are directly driven by the companies' S&P DJI ESG Score or carbon intensity and not due to the optimizer being influenced by systematic risk factors (see Exhibit 4). By minimizing active share rather than tracking error, the model naturally lowers turnover. However, importantly, a non-risk model-based optimization is more transparent than its risk model alternative because minimizing active share shifts exposure away from low ESG scoring and high carbon intensity firms and toward high ESG scoring and low carbon intensity firms. This "glass-box" transparent framework also allows for index construction to meet sophisticated, competing

[4] Commission Delegated Regulation (EU) 2020/1818 of 17 July 2020. Official Journal of the European Union. https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32020R1818&rid=1

objectives in contrast to the traditional “black-box” framework, which is purely focused on risk-based objectives.

Exhibit 4: Climate/Sustainability Data Example



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

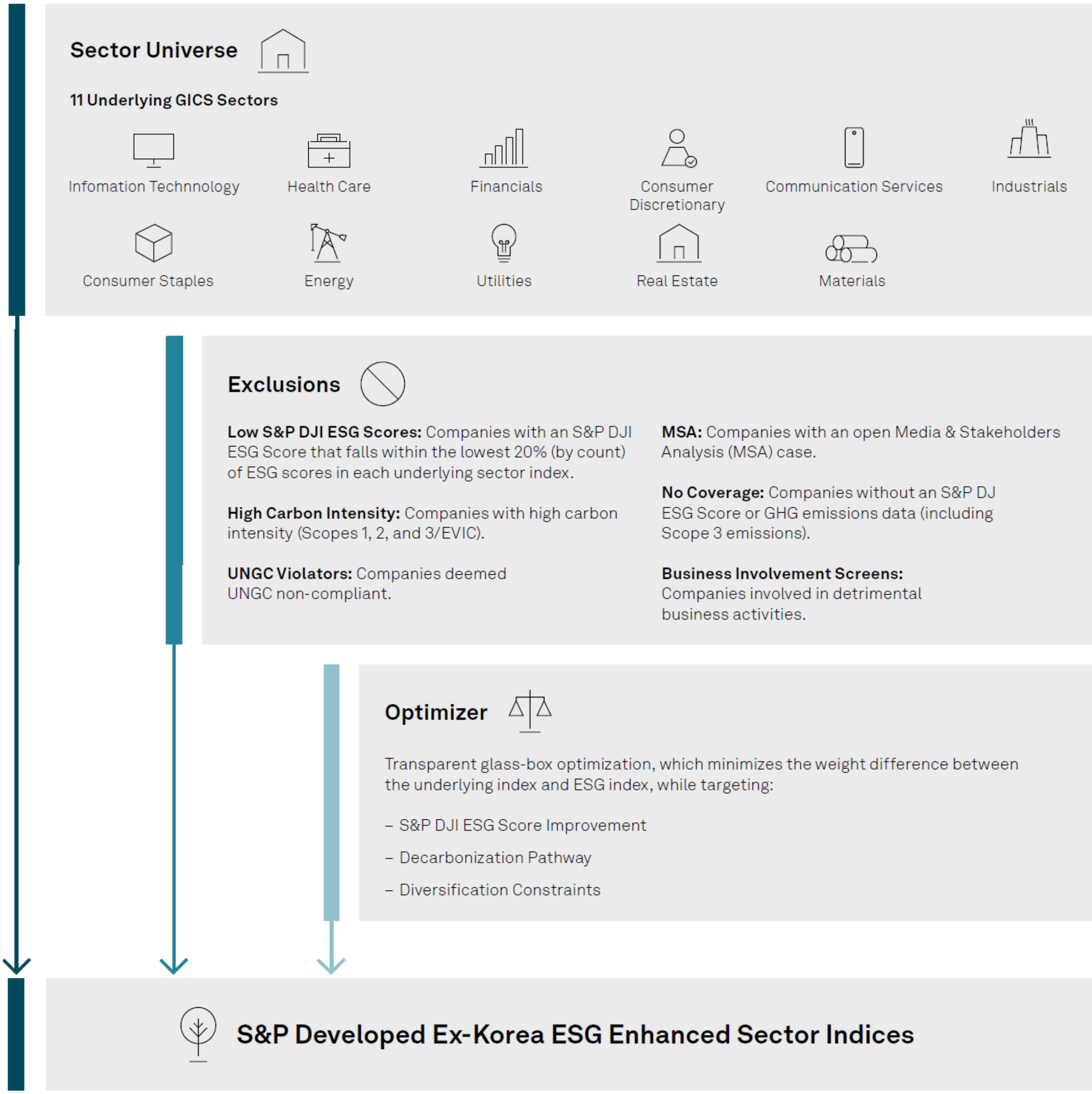
Methodology Summary

The sector universe is determined by 1 of the 11 underlying Global Industry Classification Standard (GICS®) sectors (see Exhibit 5).

The second step is to make exclusions based on business involvement, UNGC non-compliance, S&P DJI ESG Scores and carbon intensity. The methodology also excludes constituents for which there is no sustainability or carbon coverage and any constituent that is caught up in a media controversy.

The final step is to use S&P Glass-Box Optimizer to minimize the weight difference between the underlying index and ESG index while targeting an improvement in the S&P DJI ESG Score, ensuring the indices follow a minimum 30% decarbonization target and integrating various diversification constraints.

Exhibit 5: Construction of Sustainability Sector Indices



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

Sector Universe

Our sustainability sector indices are based on 11 underlying sector indices. Exhibit 6 illustrates the underlying indices for the S&P Developed Ex-Korea LargeMidCap ESG Enhanced Sector Indices.

Developed by S&P DJI and MSCI in 1999, the GICS structure provides a consistent convention for dividing the economy and investable companies into 11 sectors. Companies are assigned to one of 163 sub-industries according to their business activities. Weight in a sub-industry will then determine membership to 1 of 74 industries, 25 industry groups and 11 sectors.

Exhibit 6: S&P ESG Enhanced Sector Index and Its Underlying Index Universe

Index	Underlying Index Universe
S&P Developed Ex-Korea LargeMidCap ESG Enhanced Energy Index	S&P Developed Ex-Korea LargeMidCap Energy
S&P Developed Ex-Korea LargeMidCap ESG Enhanced Health Care Index	S&P Developed Ex-Korea LargeMidCap Health Care
S&P Developed Ex-Korea LargeMidCap ESG Enhanced Financials Index	S&P Developed Ex-Korea LargeMidCap Financials
S&P Developed Ex-Korea LargeMidCap ESG Enhanced Information Technology Index	S&P Developed Ex-Korea LargeMidCap Information Technology
S&P Developed Ex-Korea LargeMidCap ESG Enhanced Materials Index	S&P Developed Ex-Korea LargeMidCap Materials
S&P Developed Ex-Korea LargeMidCap ESG Enhanced Industrials Index	S&P Developed Ex-Korea LargeMidCap Industrials
S&P Developed Ex-Korea LargeMidCap ESG Enhanced Consumer Discretionary Index	S&P Developed Ex-Korea LargeMidCap Consumer Discretionary
S&P Developed Ex-Korea LargeMidCap ESG Enhanced Consumer Staples Index	S&P Developed Ex-Korea LargeMidCap Consumer Staples
S&P Developed Ex-Korea LargeMidCap ESG Enhanced Communication Services Index	S&P Developed Ex-Korea LargeMidCap Communication Services
S&P Developed Ex-Korea LargeMidCap ESG Enhanced Utilities Index	S&P Developed Ex-Korea LargeMidCap Utilities
S&P Developed Ex-Korea LargeMidCap ESG Enhanced Real Estate	S&P Developed Ex-Korea Real Estate

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

Exclusions

For each sustainability sector index, we make **six different exclusions** (see Exhibit 5).

UNGC Violators

The UNGC are 10 global principles. Companies commit to perform to a certain level of standards, which are related to global norms with regards to human rights, labor rights, the environment and anti-corruption. The S&P Sustainability Sector Indices will remove any company deemed noncompliant with these 10 principles.[5][6]

Business Involvement Screens

Our sustainability sector indices exclude companies involved in specific business activities considered detrimental from a sustainability perspective:[7]

- Controversial weapons
- Military contracting
- Thermal coal
- Tobacco
- Oil sands
- Small arms

[5] The UN Global Compact, which was established in 2000, commits it signatories—companies and nations from around the world—to abide by principles related to human rights, labor, the environment and anti-corruption. For more information, see www.unglobalcompact.org.

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

[7] Please see full list of exclusions and thresholds in the Appendix.

Controversy Monitoring

The S&P Global Media and Stakeholder Analysis (MSA) is a daily controversy monitoring process. The MSA captures occasions when a controversy should arise between rebalances. The MSA monitors controversies related to economic crime and corruption, fraud, illegal commercial practices, human rights issues, labor disputes, workplace safety, catastrophic accidents and environmental disasters. The S&P DJI Index Committee reviews constituents flagged by the 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 case, as determined by the S&P DJI Index Committee, it is not eligible to be included again for a full calendar year.

No Coverage

If a constituent has neither an S&P DJI ESG Score nor total GHG emissions data coverage, it will be removed. Total GHG emissions data coverage includes Scope 1, Scope 2 and Scope 3 data.

S&P DJI ESG Score

If a company's S&P DJI ESG Score falls within the bottom 20% by count in its index universe, it will be excluded from possible selection within the index.

Carbon Intensity

A company will be excluded from the index if its carbon intensity falls into both:

- The highest 10% by weight (FMC) in its GICS industry group; and
- The highest 10% by weight (FMC) in the S&P Developed Ex-Korea LargeMidCap.

By removing companies that have high carbon intensities on both an industry-group and global basis, the methodology prevents unnecessary additional exclusions in low carbon intensive sectors such as Financials, ensuring that the sectors remain broad and diversified.

The carbon intensity for the index is determined by the contribution from each constituent based on weight. As such, by removing the high contributors using an FMC target, the methodology is better able to ensure that the exclusions have a meaningful impact.

Maintaining Broad, Diversified Exposure

Our sustainability sector indices aim to make minimal modifications to the underlying index while simultaneously meeting the decarbonization and sustainability objectives laid out previously in this paper. By ensuring that the solution provided by the optimizer closely mirrors the weights of the underlying index, our sustainability sector indices have historically provided broad and diversified exposure with minimal tracking error. This is based on a mathematical optimization to minimize active share while controlling for carbon and ESG exposures (see Appendix 1).

As the optimizer reweights the indices, it will minimize active share while accounting for the constituent weight in the underlying index and the optimized weight, as well as the country weight in the underlying index and the optimized country weight. It will do this while ensuring that each constituent has an index weight of at least 0.01%.

This process is subject to three core constraints: ESG improvement, carbon reduction and diversification constraints.

ESG Improvements

The optimizer will look to ensure that the weighted average S&P DJI ESG Score of the sustainability sector index is higher than the weighted average S&P DJI ESG Score of the underlying index after having removed the exclusions and having removed 25% weight of the lowest S&P DJI ESG Score from each GICS industry group.

By integrating these constraints, the optimizer is ensuring that the sustainability sector index is more aligned with ESG values than the underlying index after the exclusions have been removed.

Carbon Reduction

The optimizer looks to ensure that the WACI of the sustainability sector index is at least 30% lower than the WACI of the underlying index. It does this by removing constituents that fall within both:

- 25% weight of the highest carbon intensity for each GICS industry group; and
- 25% of weight with the highest carbon intensity for the S&P Developed Ex-Korea LargeMidCap.

The methodology is ensuring that the highest 30% of carbon emitters are removed but also enabling the optimizer to remove more than 30% in a sector if possible.

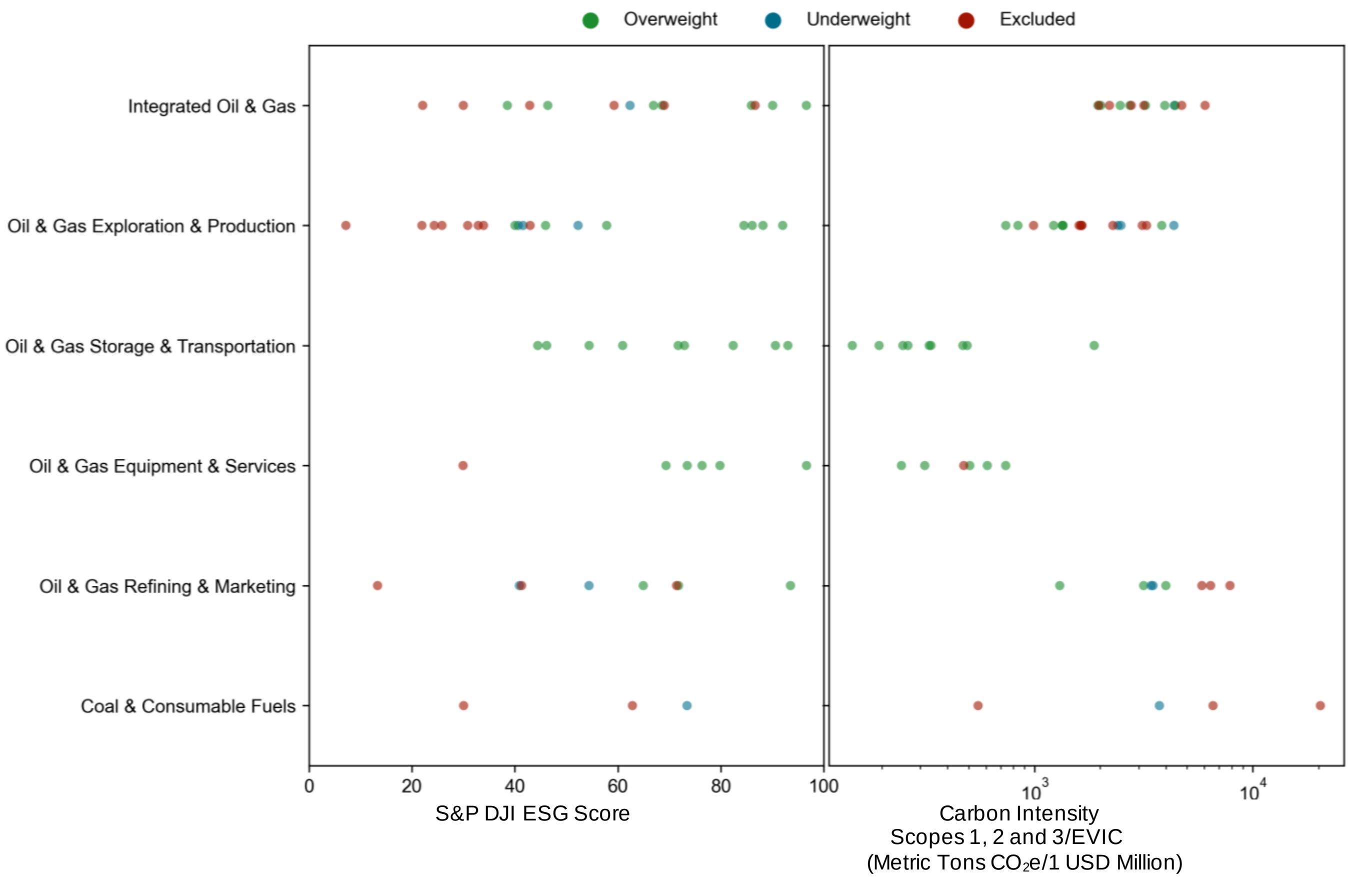
Index Construction

Sector concentration can be a concern particularly when sustainability constraints are integrated into a methodology. To prevent concentration within the S&P Sustainability Sector Indices, the optimizer has embedded the following diversification rules.

- No constituent within the sustainability sector index has more than 10 times the weight of a constituent in the underlying index.
- No constituent in the sustainability sector index has a weight greater than 5% of that within the underlying index.
- The index complies with European UCITS 20/35 diversification rules permitting the maximum company weight to reach 31.5%, while no other constituent should exceed 18%.
- The minimum constituent weight permitted is 0.01%.

After the methodology removes all exclusions, the optimizer will overweight, underweight or allocate a 0.01% weight to each remaining constituent relative to their weight within the underlying index. Exhibit 7 illustrates how sustainability and climate constraints are driving the reweighting effect at the GICS sub-industry level within the Energy sector. Companies with lower S&P DJI ESG Scores and higher carbon intensity are excluded or underweighted.

Exhibit 7: An Example of the Reweighting Effect within the Energy Sector



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

Index Performance

Each S&P Developed Ex-Korea LargeMidCap ESG Enhanced Sector Index has achieved significant S&P DJI ESG Score improvement relative to its underlying benchmark (see Exhibits 8-10). Additionally, the carbon efficiency of each S&P ESG Enhanced Sector Index is lower, as the WACI meets the target decarbonization constraint of at least 30%. The performance indicates how sustainability sector indices can provide broad, beta-like performance over one-, three- and five-year periods, with five-year tracking errors between 1.58% (Financials) and 4.95% (Communication Services).

When comparing five-year volatilities among the S&P Developed Ex-Korea LargeMidCap ESG Enhanced Sector Indices and their underlying sector indices, there was little difference, indicating that performance was broadly stable against the underlying index.

Despite all the S&P ESG Enhanced Sector Indices having a reduced stock count against each of their underlying universes, the effective number of shares—which is used as a measure for concentration—broadly remained similar or slightly lower. This indicates that the S&P ESG Enhanced Sector Indices have had a similar level of index concentration to the underlying index. For example, the S&P Developed Ex-Korea LargeMidCap ESG Enhanced Energy Sector Index includes 34 constituents versus 58 in its underlying index, yet its effective number of shares is 18.3 versus 15.1 in its underlying universe, showing that this index is in fact less concentrated than its underlying index (see Exhibit 8).

Due to the diversification constraints within the optimization process, the percentage weight of the top 10 constituents in all the S&P Developed Ex-Korea LargeMidCap ESG Enhanced Sector Indices remained similar to that of their underlying index. The Utilities sector showed the greatest difference of just over 24%, which is predominantly due to having a large stock count reduction (see Exhibit 10).

Exhibit 8: Metrics for the S&P Developed Ex-Korea LargeMidCap ESG Enhanced Energy, Health Care, Financials and Information Technology Indices

	S&P Developed Ex-Korea LMC	Energy	ESG Enhanced Energy	Health Care	ESG Enhanced Health Care	Financials	ESG Enhanced Financials	Information Technology	ESG Enhanced Information Technology
Sustainability Metrics									
Carbon Efficiency (tCO_2e/USD Million)	226.27	625.57	508.39	31.88	25.49	45.93	12.06	60.29	53.19
Temperature Alignment (Forward-Looking)	>3°C	>3°C	>3°C	1.5°C	1.5°C	1.5°C	1.5°C	1.5°C	3°C
Physical Risk (High 2050 Scenario)	26.26	39.35	37.24	19.58	18.15	10.2	5.12	17.07	16.86
Fossil Fuel Reserves	1070.06	15744.47	11177.24	0	0	0	0	0	0
Board Gender Diversity (PAI 13)	34.48	38.6	32.58	32.48	31.34	36.24	37.09	34.5	34.89
Exposure to Controversial Weapons (PAI 14)	1.57	0	0	0	0	0	0	0	0
S&P DJI ESG Score	72.41	61.75	76.23	83.96	91.75	69.03	80.97	74.66	83.4
Risk and Return									
1-Month Return (%)	1.87	3.94	4.08	3.52	3.56	3.31	2.85	-0.36	0.09
1-Year Return (%)	3.61	15.11	11.32	4.6	6.28	2.48	2.9	5.76	7.65
3-Year Return (%)	13.33	31.34	27.52	9.81	10.69	16.57	16.13	16.42	17.14
5-Year Return (%)	8.53	6.04	4.77	10.9	12.06	4.39	4.04	17.03	17.95
5-Year Volatility (%)	17.98	31.48	29.81	15.11	14.74	22.41	23.38	22.83	23.07
Concentration and Active Risk									
Tracking Error 5 Year (%)			3.25		2.12		1.58		2.11
Active Share (%)			54.81		23.37		23.85		19.34
Sector Active Share (%)			0		0		0		0
Stock Count	1598	58	34	140	101	236	169	158	101
Weight in Top 10 Companies (%)	19	62.69	64.66	40.65	49.01	31.28	36.69	64.97	70.3
Effective Number of Shares	146.87	15.1	18.3	41.21	28.72	57.31	44.9	8.96	8.75

Source: S&P Dow Jones Indices LLC. Data as of April 28, 2023. The data show how the S&P ESG Enhanced Sector Indices compare to their underlying indices on a range of financial and sustainability metrics. Colors are relative to the underlying broad index universe, the S&P Developed Ex-Korea LargeMidCap. Greener and lighter blue shades reflect better relative performance, while red and dark blue shades represent worse relative performance. The S&P Developed Ex-Korea LargeMidCap ESG Enhanced Energy, Health Care, Financials and Information Technology Indices were launched Jan. 23, 2023. All data prior to index launch date is back-tested hypothetical data. Table is provided for illustrative purposes and reflects hypothetical historical performance. Please see the Performance Disclosure at the end of this document for more information regarding the inherent limitations associated with back-tested performance.

Exhibit 9: Metrics for the S&P Developed Ex-Korea LargeMidCap ESG Enhanced Materials, Industrials, Consumer Discretionary and Consumer Staples Indices

	S&P Developed Ex-Korea LMC	Materials	ESG Enhanced Materials	Industrials	ESG Enhanced Industrials	Consumer Discretionary	ESG Enhanced Consumer Discretionary	Consumer Staples	ESG Enhanced Consumer Staples
Sustainability Metrics									
Carbon Efficiency (tCO_2e/USD Million)	226.27	884.82	687.86	167.3	191.18	75.84	94.55	166.42	122.21
Temperature Alignment (Forward-Looking)	>3°C	2°C	>3°C	>3°C	1.5°C	1.5°C	1.5°C	3°C	>3°C
Physical Risk (High 2050 Scenario)	26.26	51.55	52.31	30.26	31.37	43.54	44.97	34.91	37.07
Fossil Fuel Reserves	1070.06	5918.13	418.9	112.82	154.07	0	0	0	0
Board Gender Diversity (PAI 13)	34.48	33.69	33.28	32.27	34.8	35.17	37.14	36.66	37.01
Exposure to Controversial Weapons (PAI 14)	1.57	0	0	13.32	0	0	0	0	0
S&P DJI ESG Score	72.41	74.7	82.55	71.05	82.09	62.17	71.52	77.39	83.23
Risk and Return									
1-Month Return (%)	1.87	-0.37	0.52	0.58	0.1	0.18	3.83	4.2	4.65
1-Year Return (%)	3.61	-1.97	-5.14	8.71	4.42	-1.21	7.88	4.81	5.88
3-Year Return (%)	13.33	15.96	10.7	15.29	15.1	10.94	10.56	10.83	10.31
5-Year Return (%)	8.53	6.83	6.99	6.57	7.22	7.31	8.27	8.46	8.88
5-Year Volatility (%)	17.98	21.23	19.56	20.77	20.64	22.47	21.05	13.06	13.66
Concentration and Active Risk									
Tracking Error 5 Year (%)			4.66		3.76		4.48		3
Active Share (%)			36.67		48.25		25.46		35.75
Sector Active Share (%)			0		0		0		0
Stock Count	1598	111	70	294	143	167	95	125	66
Weight in Top 10 Companies (%)	19	37.79	48.18	20.42	39.03	52.37	61.65	50.61	65.34
Effective Number of Shares	146.87	40.84	25.83	108.43	42.23	20.05	15.18	29.23	18.14

Source: S&P Dow Jones Indices LLC. Data as of April 28, 2023. The data show how the S&P ESG Enhanced Sector Indices compare to their underlying indices on a range of financial and sustainability metrics. Colors are relative to the underlying broad index universe, the S&P Developed Ex-Korea LargeMidCap. Greener and lighter blue shades reflect better relative performance, while red and dark blue shades represent worse relative performance. The S&P Developed Ex-Korea LargeMidCap ESG Enhanced Materials, Industrials, Consumer Discretionary and Consumer Stapes Indices were launched April 3, 2023. All data prior to index launch date is back-tested hypothetical data. Table is provided for illustrative purposes and reflects hypothetical historical performance. Please see the Performance Disclosure at the end of this document for more information regarding the inherent limitations associated with back-tested performance.

Exhibit 10: Metrics for the S&P Developed Ex-Korea LargeMidCap ESG Enhanced Communication Services, Utilities and Real Estate Indices

	S&P Developed Ex-Korea LMC	Communication Services	ESG Enhanced Communication Services	Utilities	ESG Enhanced Utilities	Real Estate	ESG Enhanced Real Estate
Sustainability Metrics							
Carbon Efficiency (tCO_2e/USD Million)	226.27	36.16	32.13	1369.67	731.31	89.2	122.54
Temperature Alignment (Forward-Looking)	>3°C	3°C	>3°C	2°C	2°C	1.5°C	1.5°C
Physical Risk (High 2050 Scenario)	26.26	17.41	16.44	59.69	59.01	40.74	42.07
Fossil Fuel Reserves	1070.06	0	0	402.45	0	0	0
Board Gender Diversity (PAI 13)	34.48	32.18	32.52	35.92	37.79	28.53	28.77
Exposure to Controversial Weapons (PAI 14)	1.57	0	0	0	0	0	0
S&P DJI ESG Score	72.41	69.45	80.05	64.83	72.04	61.78	73.73
Risk and Return							
1-Month Return (%)	1.87	3.38	4.23	3.05	2.49	1.85	2.37
1-Year Return (%)	3.61	0.4	4.1	0.88	3.42	-14.46	-14.91
3-Year Return (%)	13.33	5.86	8.28	8.94	10.66	4.05	6.06
5-Year Return (%)	8.53	4.9	5.87	7.74	8.06	2.52	3.58
5-Year Volatility (%)	17.98	19.98	20.97	14.99	15.49	18.02	19.04
Concentration and Active Risk							
Tracking Error 5 Year (%)			4.95		2.61		2.73
Active Share (%)			33.96		53.1		23.89
Sector Active Share (%)			0		0		0
Stock Count	1598	101	51	90	35	118	87
Weight in Top 10 Companies (%)	19	73.82	77.73	41.64	66.69	42.97	50.83
Effective Number of Shares	146.87	11.83	11.91	35.47	16.88	34.42	22.87

Source: S&P Dow Jones Indices LLC. Data as of April 28, 2023. The data show how the S&P ESG Enhanced Sector Indices compare to their underlying indices on a range of financial and sustainability metrics. Colors are relative to the underlying broad index universe, the S&P Developed Ex-Korea LargeMidCap. Greener and lighter blue shades reflect better relative performance, while red and dark blue shades represent worse relative performance. The S&P Developed Ex-Korea LargeMidCap ESG Enhanced Communication Services, Utilities and Real Estate Indices were launched April 3, 2023. All data prior to index launch date is back-tested hypothetical data. Table is provided for illustrative purposes and reflects hypothetical historical performance. Please see the Performance Disclosure at the end of this document for more information regarding the inherent limitations associated with back-tested performance.

Through sector allocation, investors can express their global macroeconomic views. However, our sustainability sector indices successfully enable investors to achieve this while integrating their long-term sustainability values. Additionally, this can be achieved through indices that have historically had lower carbon intensity and remained diversified with broad beta-like returns, meaning there is no need to sacrifice performance.

Rebalance

The indices rebalance semiannually after the close of trading on the last business day of April and October.

Quarterly Capping

Capping is performed at the semiannual rebalance on the last business day of April and October. The indices are also reviewed to limit the likelihood of breaching the UCITS 20/35 diversification rule. Capping will occur when the largest constituent closing weight exceeds 33% or the second largest closing company weight exceeds 19%. The review reference dates are the close of the last business day of June and December. If the capping process is triggered, there is an ad-hoc capping, which will be effective after the close of the last business day of July and January.

Reviews outside of the Rebalance

GICS Reclassification

The GICS framework is reviewed annually to ensure that the structure continues to reflect global equity markets. If a constituent is dropped from the underlying sector index, it will also be removed from the respective sustainability sector index. As a result, any constituent that changes GICS classification intra-quarter will get dropped on the same day. However, the dropped constituent will not be reintroduced into another sustainability sector index unless an ad-hoc rebalance has been triggered. A trigger will occur either by the next quarterly GICS review or the next semiannual reconstitution, depending on which is soonest. Alternatively, an ad-hoc rebalancing can occur at the discretion of the S&P DJI Index Committee. This may occur if the sum of the weight of the constituents with GICS sector changes is greater than 5% in any of the underlying sector indices.

Quarterly Eligibility Review

Constituents are reviewed every quarter to ensure they remain eligible for inclusion with regards to their business activities and UNGC compliance. The quarterly constituent review also checks on GICS classification and UCITS 20/35 diversification capping.

Any company that is deemed ineligible will be removed from the index and not replaced. This process ensures that the index reflects any changes to a company's eligibility in a timely manner, as well as maintaining adherence to the values of the objectives set within the methodology.

Daily Checks

As mentioned previously, the MSA is a daily controversy monitoring that monitors controversies related to economic crime and corruption, fraud, illegal commercial practices, human rights issues, labor disputes, workplace safety, catastrophic accidents and environmental disasters. The MSA will capture occasions when a controversy arises between rebalances.

If a stock is dropped from the underlying S&P Sector Index, it is also removed from the respective sustainability sector index. A stock may not exist in the sustainability sector index temporarily but may be reincluded in the correct sector should there be an ad-hoc rebalance, a quarterly GICS review or a semiannual reconstitution.

Conclusion

Sectors have long been a tool in investors' arsenal, allowing them to take a more targeted approach to different market segments and fine tune their strategies through the economic cycle.

S&P DJI has introduced sustainability sector indices that equip market participants with an index solution that allows them to express a sector view while accounting for long-term sustainability considerations. Through the S&P Glass-Box Optimizer, the sustainability sector index methodologies incorporate numerous different objectives, offering meaningful carbon intensity reduction and sustainability improvement while historically reflecting the non-sustainability sector universe as closely as possible.

Appendix

At each rebalancing reference date, companies with the following specific business activities, as determined by Sustainalytics, are excluded from the eligible universe.

Exhibit 11: Activities Excluded from Our Sustainability Sector Index Universe

Product Involvement	Sustainalytics		S&P DJI	
	Category of Involvement and Description	Involvement Proxy	Level of Involvement Threshold	Significant Ownership Threshold
Controversial Weapons	**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.	N/A	>0%	≥25%
	Non-Tailor-Made or Non-Essential: The company provides components for the core weapon system that are not considered tailor-made or not essential to the lethal use of the weapon.		>0%	≥25%
Military Contracting	**Weapons:** The company manufactures military weapon systems or integral, tailor-made components of these weapons.	Revenue	≥5%	N/A
	Weapon-Related Products or Services: The company provides tailor-made products or services that support military weapons.		≥5%	N/A
Thermal Coal	**Extraction:** The company extracts thermal coal.	Revenue	≥5%	N/A
	Generation: The company generates electricity from thermal coal.		≥5%	N/A
Tobacco Products	**Production:** The company manufactures tobacco products.	Revenue	>0%	≥25%
	Related Products/Services: The company supplies tobacco-related products/services.		≥5%	N/A
	Retail: The company derives revenues from the distribution or retail sale of tobacco products.		≥5%	N/A
Oil Sands	**Extraction:** The company extracts oil sands.	Revenue	≥5%	N/A
Small Arms	**Civilian Customers (Assault Weapons):** The company manufactures and sells assault weapons to civilian customers.	Revenue	>0%	≥25%
	Civilian Customers (Non-Assault Weapons): The company manufactures and sells small arms (non-assault weapons) to civilian customers.		>0%	≥25%
	Military/Law Enforcement Customers: The company manufactures and sells small arms to military/law enforcement customers.		>0%	≥25%
	Key Components: The company manufactures and sells key components of small arms.		>0%	≥25%
	Retail/Distribution (Assault Weapons): The company is involved in the retail or distribution of assault weapons.		≥5%	N/A
	Retail/Distribution (Non-Assault Weapons): The company is involved in the retail or distribution of small arms (non-assault weapons).		≥5%	N/A

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

Performance Disclosure/Back-Tested Data

The S&P Developed Ex-Korea LargeMidCap ESG Enhanced Energy, Health Care, Financials and Information Technology Indices were launched Jan. 23, 2023. The S&P Developed Ex-Korea LargeMidCap ESG Enhanced Materials, Industrials, Consumer Discretionary, Consumer Stapes Communication Services, Utilities and Real Estate Indices were launched April 3, 2023. All information presented prior to an index's Launch Date is hypothetical (back-tested), not actual performance, and is based on the index methodology in effect on the index 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. Complete index methodology details are available at www.spglobal.com/spdji. 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.

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. Back-tested performance is for use with institutions only; not for use with retail investors.

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.

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 S&P DJI's 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.

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