S&P Dow Jones Indices

A Division of S&P Global

The S&P 500® ESG Index:
Integrating Environmental, Social, and Governance Values into the Core

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EXECUTIVE SUMMARY

- The S&P 500 ESG Index aligns investment objectives with environmental, social, and governance (ESG) values.
- It can serve as a benchmark as well as the basis for index-linked investment products. The index's broad market exposure and industry diversification result in a return profile similar to that of the S&P 500.
- The index uses the new S&P DJI ESG Scores (see page 4) and other ESG data to select companies, targeting 75% of the market capitalization of each GICS® industry group within the S&P 500.
- The S&P 500 ESG Index excludes tobacco, controversial weapons, and companies not in compliance with the UN Global Compact (UNGC). In addition, those with S&P DJI ESG Scores in the bottom 25% of companies globally within their GICS industry groups are excluded.
- Our methodology results in an improved composite ESG score compared with the S&P 500. This holds true in all industries.

INTRODUCTION

An increasing number of investors require indices that are aligned with their investment objectives and their personal or institutional values. The S&P 500 ESG Index was designed with both of these needs in mind.

The S&P 500 ESG Index is broad and constructed to be part of the core of an investor's portfolio, unlike many ESG indices that have preceded it, which were thematic or narrow in their focus. By targeting 75% of the S&P 500's market capitalization, industry by industry, the S&P 500 ESG Index offers industry diversification and a return profile in line with the U.S. large-cap market.

Yet the composition of this new index is meaningfully different from that of the S&P 500 and more compatible with the values of ESG investors. Exclusions are made related to tobacco, controversial weapons, and compliance with the UNGC. Furthermore, companies with low ESG scores relative to their industry peers around the world are also excluded. The result is an index suitable for investors moving ESG from the fringe of their portfolio to the core.

The S&P 500 ESG Index is constructed to be part of the core of a portfolio…

KEY OBJECTIVES

The methodology of the S&P 500 ESG Index was constructed with two objectives:

- To provide a similar risk/return profile to the S&P 500; and
- To avoid companies that are not managing their businesses in line with ESG principles, while including companies that are.

…unlike many previous ESG indices, which were thematic or narrow in their focus.

These two objectives run somewhat counter to each other. Eliminating companies from the S&P 500 necessarily changes its performance. But with further methodological adjustments, the industry composition of the S&P 500 ESG Index is brought back into general alignment with the S&P 500.

METHODOLOGY SUMMARY

Exclusions

The objectives of the index are to provide a similar risk/return profile to the S&P 500…

Companies are eliminated that:

- Produce tobacco, have tobacco sales accounting for greater than 10% of their revenue, derive more than 10% of their revenue from tobacco-related products and services, or hold more than a 25% stake in a company involved in these activities;
- Are involved in controversial weapons, including cluster weapons, landmines, biological or chemical weapons, depleted uranium weapons, white phosphorus weapons, or nuclear weapons, or hold more than a 25% stake in a company involved in these activities;
- Have a UNGC score that is in the bottom 5% of scores in the eligible universe;[1,2] or
- Have an S&P DJI ESG Score that is in the bottom 25% of scores within their GICS industry group in the S&P Global LargeMidCap and S&P Global 1200.

…and to avoid companies that are not managing their businesses in line with ESG principles.

[1] The UNGC, 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.

[2] Calculated by Arabesque.

Exhibit 1: The S&P 500 ESG Index Summary

Objective: To target 75% of the market capitalization within each GICS industry group of the S&P 500, using the S&P DJI ESG Score.

Step 1:

Exclude companies involved in tobacco or controversial weapons, or with a low UNGC score.

Step 2:

Exclude companies with S&P DJI ESG Scores in the bottom 25% of their GICS industry group globally.

Step 3:

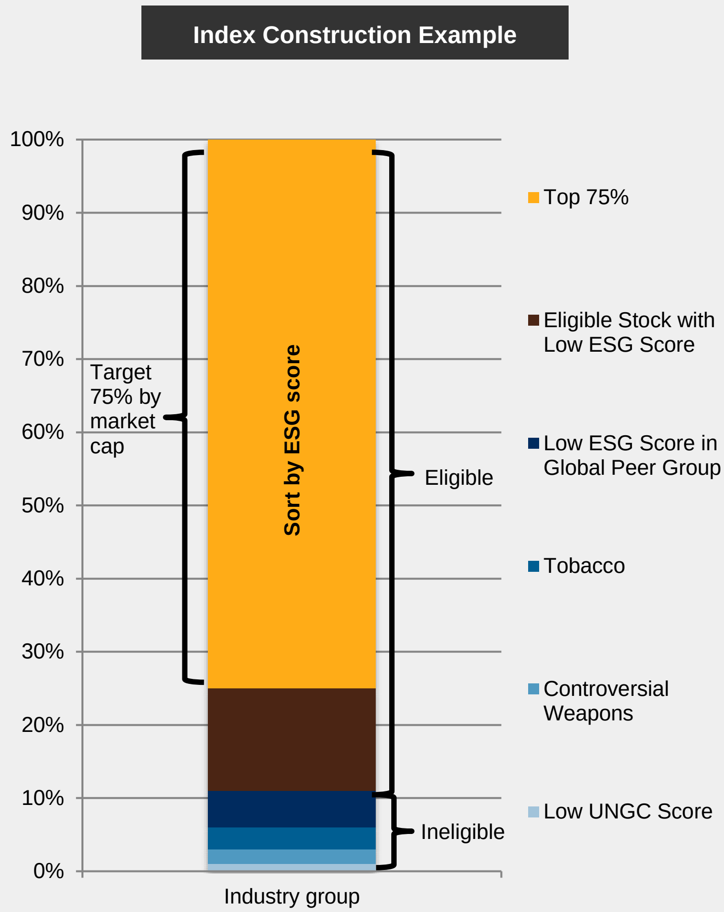
Within the S&P 500, sort the remaining companies by their S&P DJI ESG Scores within each GICS industry group.

Step 4:

Starting from the company with the highest S&P DJI ESG Score, select companies for inclusion from the top down, targeting 75% of the GICS industry group.

Step 5:

Weight companies by float-adjusted market capitalization.



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

Overall, 195 constituents of the S&P 500 were excluded from the S&P 500 ESG Index, totaling 23.46% of the S&P 500 market capitalization as of June 30, 2020. Exhibit 2 ranks the reasons behind these exclusions.

Exhibit 2: Reasons for Exclusion from the S&P 500 ESG Index

REASON FOR EXCLUSION	NUMBER OF EXCLUSIONS	WEIGHT IN S&P 500 (%)
Not Part of the Top 75% of Industry Group Market Cap	134	12.79
S&P DJI ESG Score in Bottom 25% of Industry Group Globally	34	4.20
Involved in Controversial Weapons	9	1.91
Addition to S&P 500 Following Rebalance Reference Date	8	0.56
UNGC Score Too Low	3	1.17
Not Eligible Due to Prior Media & Stakeholder Analysis Case	3	1.95
Involved in Tobacco Production or Sales	2	0.98
Company Not Covered	2	0.18

Source: S&P Dow Jones Indices LLC. Data as of June 30, 2020. Table is provided for illustrative purposes.

Constituent Selection and Weighting

The key criteria for constituent eligibility and selection in the S&P 500 ESG Index are the S&P DJI ESG Scores…

Once the exclusions are made, the index constituents are selected in the following manner.

1. Companies are ranked by their S&P DJI ESG Score.
2. Within each GICS industry group, companies are selected from the top down by S&P DJI ESG Score until 75% of the float-adjusted market capitalization of the S&P 500 GICS industry group is reached.

The index constituents are then weighted by their float-adjusted market capitalization. Using these rules, the index is rebalanced on an annual basis, after the close of trading on the last business day of April.[3]

…which are based on data gathered through SAM's corporate sustainability assessment.

S&P DJI ESG Scores

The key criteria for constituent eligibility and selection in the S&P 500 ESG Index are the S&P DJI ESG Scores. The S&P DJI ESG Scores are based on data gathered by SAM, a division of RobecoSAM, through SAM's Corporate Sustainability Assessment (CSA). The CSA is an annual evaluation of companies' sustainability practices, covering a wide range of industry-specific ESG criteria.

SAM, founded in 1995, was the world's first investment company focused on sustainable investment.

Data come from either the companies' responses to the CSA or research done by SAM on publicly available information for companies that do not fill out the CSA. A preliminary score is then calculated for each company as a weighted sum of a number of individual ESG indicators for each company, with each indicator corresponding to a different question in the CSA. The indicators are weighted to eliminate biases among different industries.

In 1999, SAM partnered with S&P DJI to launch the Dow Jones Sustainability Indices.

This preliminary score is then modified to account for differences that may exist between companies that complete the CSA (where information is provided directly by participating companies) versus companies that are assessed purely on the basis of publicly available information. In an effort to capture underreported or upcoming sustainability issues, the CSA methodology covers ESG indicators that may not be widely reported in the public domain. Scores are then normalized across individual indicators, and then once more at the final score level based on an "anchor" universe, defined as the combination of the S&P Global 1200 and the S&P Global LargeMidCap, resulting in the S&P DJI ESG Score (see Exhibit 3).

[3] Please see the S&P ESG Index Series Methodology for more information on the S&P 500 ESG Index.

When controversies unfold, SAM reviews them to consider whether the ESG score should be reduced…

…and then the S&P DJI Index Committee determines whether the company should be removed.

Exhibit 3: Description of S&P DJI ESG Scores

CHARACTERISTIC	DESCRIPTION
Underlying Research Methodology	SAM CSA
Calculation Agent	SAM ESG data, ratings, and benchmarking
Review Frequency	Annually (with quarterly controversy updates)
Data Collection	Direct company participation through CSA or assessment of publicly available data by SAM analysts
Question Scoring	Aggregation of data points by predefined CSA methodology; unanswered questions are not scored
Question Weights	Predefined CSA weights by SAM, based on financial materiality of sustainability topics to a specific industry
Criteria Scoring	Question scores are aggregated to a criteria score; weight of unanswered questions is redistributed among other questions within criteria
Criteria Weights	Predefined CSA weights by SAM, based on financial materiality of sustainability topics to a specific industry
Dimension Scoring	Criteria scores are aggregated to a dimension score; if all questions in a criteria are unanswered, the weight of that criteria is redistributed among other criteria within a dimension (economic, environmental, and social)
Dimension Weights	Dimension weights are always preserved according to the original SAM weighting scheme
Total ESG Score	Relative score calculated
Score Type	Relative (scores are normalized within assessed SAM industry)

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

Controversies

When controversies unfold between annual rebalances of the S&P 500 ESG Index, SAM reviews these to consider whether a company's S&P DJI ESG Score should be reduced. The S&P DJI Index Committee overseeing the index then determines whether the company should be removed. Controversies monitored by SAM include those related to economic crime and corruption, fraud, illegal commercial practices, human rights issues, labor disputes, workplace safety, catastrophic accidents, and environmental disasters. Once a company is removed from the index, it is not eligible again for a full calendar year.

By selecting 75% of each industry group's market cap in the S&P 500, industry weights are closely aligned with those of the S&P 500…

…which allows the S&P 500 ESG Index to track the S&P 500 closely, while offering improved ESG performance across each industry group.

CHARACTERISTICS OF THE S&P 500 ESG INDEX

The methodology of the S&P 500 ESG Index is constructed to be simple, with straightforward exclusions and a selection process meant to keep the index's industry weights in line with those of the S&P 500. By virtue of selecting 75% of each GICS industry group's market capitalization in the S&P 500, industry weights are closely aligned with those of the S&P 500. This allows the S&P 500 ESG Index to track the S&P 500 closely (see Exhibit 4), while offering improved ESG performance across each industry group (see Exhibit 5).

The composite ESG score of the S&P 500 ESG Index was 66.72, an increase of 8.96 compared with the S&P 500.

ESG score improvement is most appropriately measured at the industry level…

…and the average change in ESG score across industries was 10.78.

Exhibit 4: Fundamental Calculations of the S&P 500 ESG versus the S&P 500

CATEGORY	S&P 500	S&P 500 ESG INDEX
Number of Constituents	505	310
Float-Adjusted Market Cap (USD Billions)	25,637	19,622
ANNUALIZED TOTAL RETURNS (%)		
Five-Year	10.73	11.33
Three-Year	10.73	12.18
One-Year	7.51	10.77
EXCESS RETURNS (%)		
Five-Year	-	0.60
Three-Year	-	1.45
One-Year	-	3.27
ANNUALIZED RISK (%)		
Five-Year	14.76	14.58
Three-Year	16.95	16.64
REALIZED TRACKING ERROR (%)		
Five-Year	-	0.89
Three-Year	-	0.97
One-Year	-	1.27

Source: S&P Dow Jones Indices LLC. Data as of June 30, 2020. Past performance is no guarantee of future results. 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.

The composite ESG score of the S&P 500 ESG Index was 66.72, compared with the S&P 500's score of 57.76, an increase of 8.96. This composite score is derived by converting each constituent's S&P DJI ESG Score into a z-score, calculating the weighted average of the z-scores within the index, and once again converting that weighted average into an S&P DJI ESG Score, using the cumulative distribution function with a mean of zero and a standard deviation of one.

S&P DJI ESG Scores are designed to be read as percentiles. A score of 70 means that company has a stronger score than 70% of the companies in that particular industry. A score of 57.76 means that the S&P 500 had a higher score than 57.76% of the companies in the broader universe. As a result, a score increase of 8.96 from the S&P 500 to the S&P 500 ESG is over 21% of the possible improvement that the index could have.

ESG score improvement is most appropriately measured at the industry level, as the S&P DJI ESG Scores are normalized by industry (see Exhibit 5). The average change in ESG score across industries was 10.78.

The S&P 500 ESG Index tracks the S&P 500 closely…

Exhibit 5: Top 10 Industries (as Defined by SAM) by Overall ESG Score Improvement

INDUSTRY	S&P DJI ESG SCORE (S&P 500)	S&P DJI ESG SCORE (S&P 500 ESG INDEX)	CHANGE
Health Care Equipment & Supplies	41.40	78.68	37.28
Automobiles	65.40	93.09	27.69
IT Services	35.58	62.40	26.82
Leisure Equipment & Products and Consumer Electronics	37.95	64.49	26.53
Hotels, Resorts & Cruise Lines	52.82	76.82	23.99
Household Products	46.34	70.11	23.77
Energy Equipment & Services	50.04	73.63	23.59
Electronic Equipment, Instruments & Components	28.01	51.57	23.57
Software	53.19	75.97	22.78
Banks	32.74	55.49	22.75

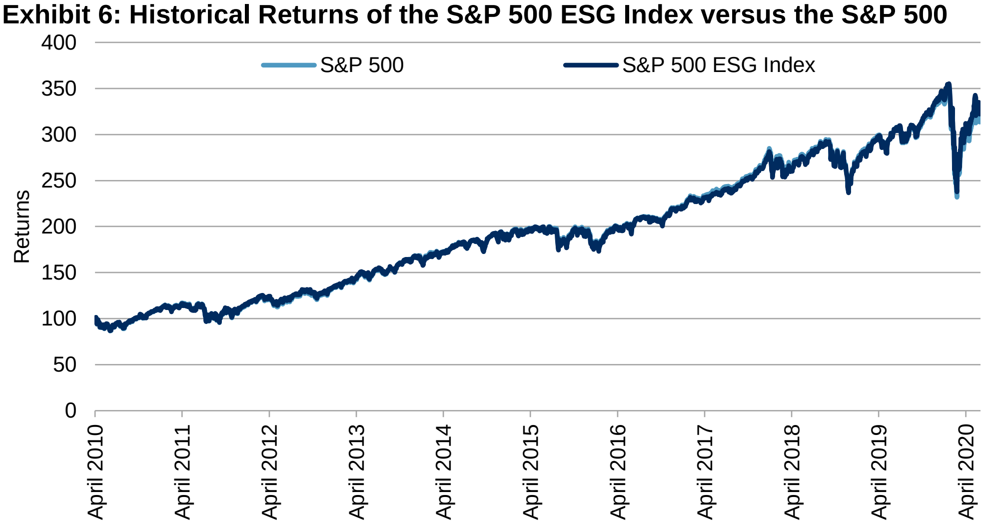
Source: S&P Dow Jones Indices LLC. Data as of June 30, 2020. Table is provided for illustrative purposes.

…and it has done so, despite excluding more than 30% of constituents.

Return Profile

The S&P 500 ESG Index tracks the S&P 500 closely, and it has done so despite excluding more than 30% of constituents based on the various eligibility criteria (see Exhibit 6). Realized tracking errors for the one-, three-, and five-year periods were consistently about 1%, and the index volatility was nearly identical to the S&P 500 over the three- and five-year periods.

Exhibit 6: Historical Returns of the S&P 500 ESG Index versus the S&P 500



Source: S&P Dow Jones Indices LLC. Data as of June 30, 2020. Past performance is no guarantee of future results. Chart 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.

The S&P 500 ESG Index is designed to integrate ESG factors into core investments, while not straying far from the overall profile of the S&P 500.

CONCLUSION

The S&P 500 ESG Index is designed for investors wishing to integrate ESG factors into their core investments, while not straying far from the overall profile of the S&P 500.

PERFORMANCE DISCLOSURE

The S&P 500 ESG Index was launched January 28, 2019. All information presented prior to an index's Launch Date is hypothetical (back-tested), not actual performance. The back-test calculations are based on the same methodology that was 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. Complete index methodology details are available at www.spdji.com. Past performance of the Index is not an indication of future results. Prospective application of the methodology used to construct the Index may not result in performance commensurate with the back-test returns shown.

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 at a fixed value for calculation purposes. The Launch Date designates the date upon which 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 datafeed 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.

The back-test period does not necessarily correspond to the entire available history of the Index. Please refer to the methodology paper for the Index, available at www.spdji.com 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.

Another limitation of using back-tested information is that the back-tested calculation is generally prepared with the benefit of hindsight. Back-tested information reflects the application of the index methodology and selection of index constituents in hindsight. No hypothetical record can completely account for the impact of financial risk in actual trading. For example, there are numerous factors related to the equities, fixed income, or commodities markets in general which cannot be, and have not been accounted for in the preparation of the index information set forth, all of which can affect actual performance.

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