S&P Dow Jones Indices

A Division of S&P Global

The S&P 500® ESG Index: 5 Years of Defining Core through an ESG Lens

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Launched on Jan. 28, 2019, the S&P 500 ESG Index marked a significant milestone in sustainable investing. While the S&P 500 ESG Index leverages the strength, liquidity and power of the S&P 500, it also incorporates meaningful ESG factors. As a result, the index has shifted the perception of ESG indices from mere reporting tools to integral components used for investment strategies.

Intentionally broad, the S&P 500 ESG Index includes over 300 companies from the underlying S&P 500 and seeks to reflect many of the attributes of the S&P 500 itself to offer benchmark-like performance, while providing an improved ESG profile. This paper outlines the characteristics of the S&P 500 ESG Index that have appealed to investors, including:

- The easy-to-understand and transparent methodology behind the index;
- The index's historically similar risk-adjusted performance profile to the S&P 500; and
- Improved ESG characteristics when compared with the S&P 500.

Along with the S&P 500 ESG Index, S&P Dow Jones Indices (S&P DJI) offers a range of indices that consider different levels of conviction on the integration of ESG factors, including the S&P 500 ESG Leaders Index and the S&P 500 ESG Elite Index. As a result, the S&P ESG Index Methodology can be utilized by a wide range of market participants to help them achieve their objectives.

Ecosystem

Since its launch in January 2019, the S&P 500 ESG Index has experienced significant growth in investment products tied to it, as shown in Exhibit 1.[1] This broad ecosystem surrounding the S&P 500 ESG Index serves as a foundation for various financial products including exchange-traded funds (ETFs), exchange-traded derivatives (ETDs), mutual funds, insurance products and structured products. ETDs encompass futures contracts, such as the E-mini S&P 500 ESG Index Futures offered by CME,[2] as well as options contracts, such as options on the S&P 500 ESG Index offered by Cboe.[3] This ecosystem provides traders with meaningful market liquidity, which bolsters the index's position as the most liquid sustainability index for U.S. equities.[4]

The ecosystem of ETFs and ETDs provides investors with a range of advantages including increased liquidity, diversification benefits, risk management options and trading flexibility.

- **Enhanced liquidity:** Having both ETFs and ETDs linked to the S&P 500 ESG Index, investors have multiple avenues to access the underlying assets. This can increase liquidity in the market, as investors can trade ETF shares or ETD contracts.
- **Diversification:** The range of ETFs that utilize the S&P 500 ESG Index means investors can gain exposure to a basket of securities that integrate ESG scores, while ETDs allow investors to gain exposure synthetically, through derivative contracts. This combination can help investors achieve a diversified portfolio with an ESG lens.
- **Risk management:** ETDs can be used for effective risk management, such as hedging against market fluctuations or managing portfolio risk.
- **Trading flexibility:** Having both ETFs and ETDs linked to the S&P 500 ESG Index provides investors with flexibility in terms of trading strategies and execution.

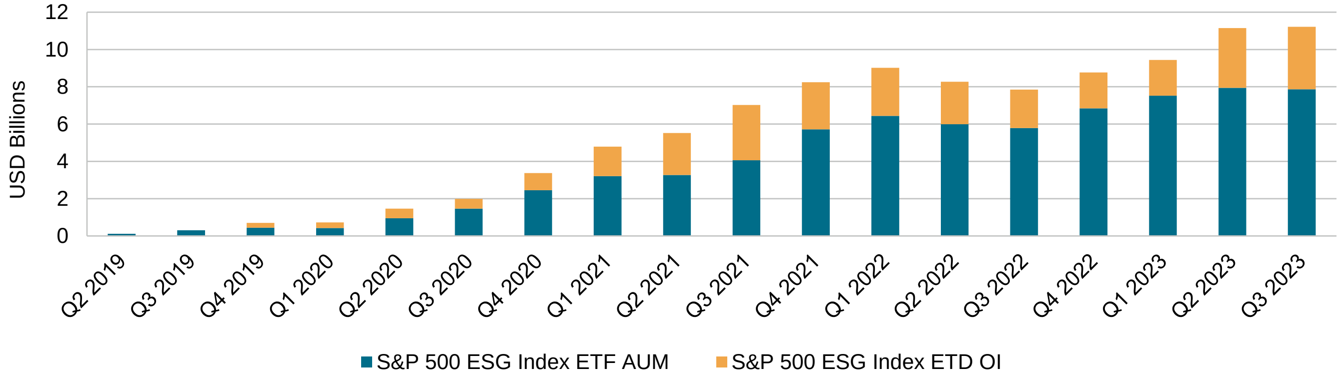
[1] See Spivey, Aran, Orzano, Michael, Zilberman, Igor "The Growing S&P 500 ESG Index Liquidity Ecosystem"

[2] See E-mini S&P 500 ESG Index Overview - CME Group

[3] See S&P 500 ESG Index Options (cboe.com)

[4] See Spivey, Aran, Orzano, Michael, Zilberman, Igor "The Growing S&P 500 ESG Index Liquidity Ecosystem"

Exhibit 1: S&P 500 ESG ETF AUM and Exchange-Traded Derivative (ETD) Open Interest



Source: S&P Dow Jones Indices LLC, FIA, Bloomberg. Data as of Sept. 29, 2023. Past performance is no guarantee of future results. Chart is provided for illustrative purposes.

The S&P Global ESG Scores: Building Blocks for the S&P 500 ESG Index

Environmental, social and governance (ESG) scores play a critical role in the construction of the S&P 500 ESG Index. Launched in 2019, the index integrated the S&P DJI ESG Scores and used them to rank companies and determine a company's eligibility for inclusion based on their sustainability performance relative to industry peers.

In March 2024, S&P DJI's ESG indices transitioned[5] from using the S&P DJI ESG Scores to the S&P Global ESG Scores with the aim of standardizing the scoring framework across S&P Global. This shift was motivated by the introduction of enhanced modeling approaches to the S&P Global ESG Scores,[6] which provide a more nuanced evaluation of a company's ESG performance. Explore in more detail the rationale and impact of the changes here.

The S&P Global ESG Scores methodology[7] is built upon the Corporate Sustainability Assessment (CSA), which gathers detailed data (an average of 1,000 data points per company) on sustainability practices from thousands of companies. These scores measure a company's management of material ESG risks and opportunities, with the CSA serving as a primary source of information. The CSA methodology accounts for industry-specific sustainability topics and employs a binary approach to non-disclosure, historically assigning the minimum score to unanswered questions or to data not publicly disclosed.[8] As of March 2023, the CSA considered 62 different industries.

[5] Please see the announcement for more details

[6] For more information on S&P Global ESG Scores, please see here.

[7] For a comprehensive understanding of the S&P Global ESG Scores methodology, please refer to the S&P Global ESG Scores Methodology

[8] How our approach to ESG Scores is evolving | S&P Global (spglobal.com)

Index Construction

The index methodology was developed with two objectives:

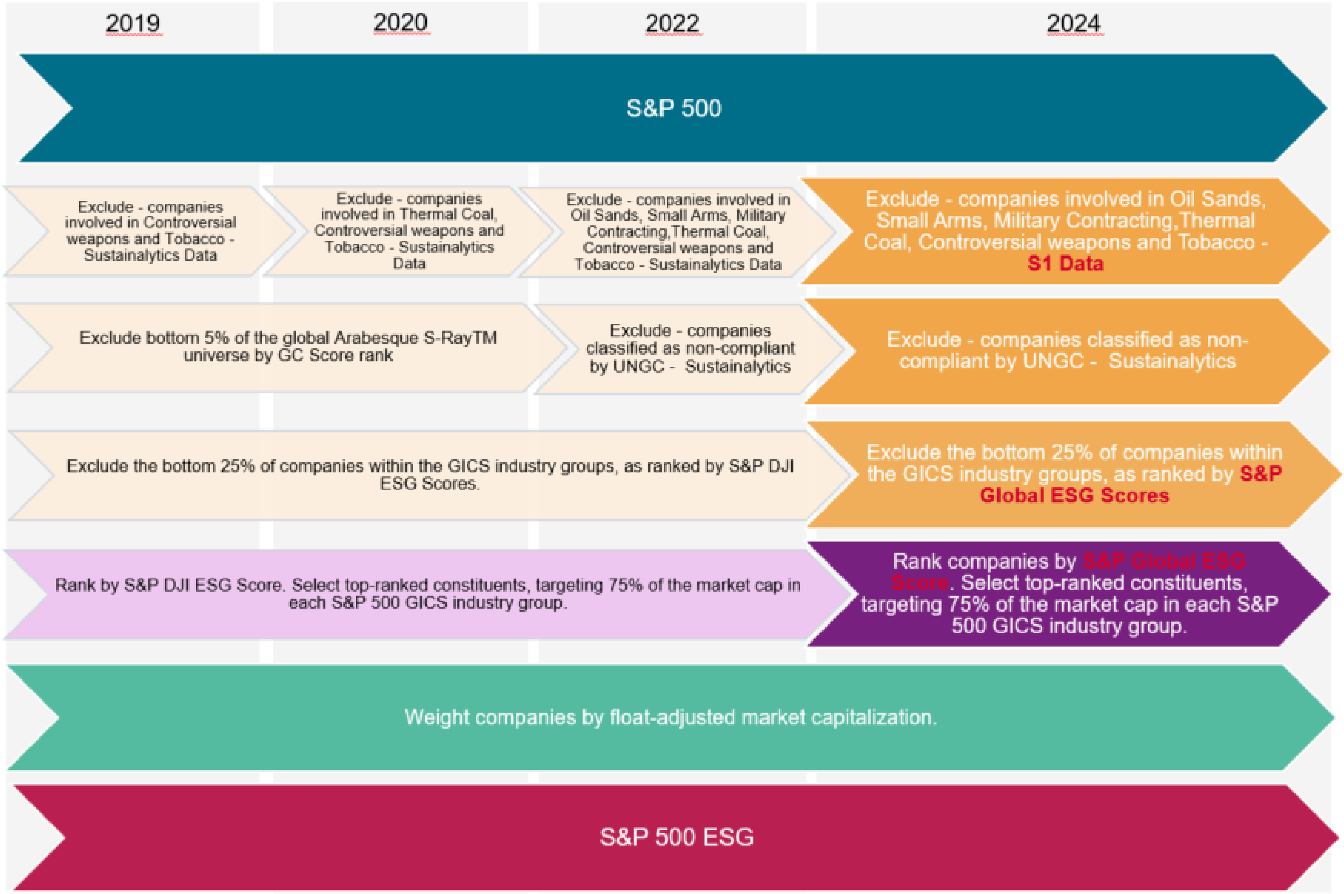
- To maintain similar overall industry group weights as the S&P 500, which has historically resulted in similar risk-adjusted performance; and
- To reduce exposure to companies that are not managing their businesses in line with ESG principles, according to the S&P Global ESG Scores and other relevant ESG data, while including companies that are doing so.

Although these two objectives could be perceived as running counter to each other, with methodological adjustments, the industry composition of the S&P 500 ESG Index is realigned with the S&P 500. Historically, these adjustments have resulted in a benchmark-like risk-adjusted performance profile.

S&P DJI regularly assesses our methodologies and data sources to ensure we provide the highest standards of quality, transparency and alignment with our stated objectives. The dynamic nature of the ESG landscape means that there is room for diverse investment approaches and continuous product evolution.[9] Through our consultations, we offer an opportunity to provide feedback on potential modifications to index methodologies. Exhibit 2 ilustrates the evolution of the S&P 500 ESG Index Methdology.

[9] Please see "The S&P 500 ESG Index Turns 5!"

Exhibit 2: Evolution of the S&P 500 ESG Index Methodology



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

Methodology Summary

The S&P 500 ESG Index is the result of a transparent and public rules-based methodology, aiming to provide similar overall industry group weights to their underlying index, while simultaneously offering an enhanced ESG profile (see Exhibit 3). Starting from the underlying index, the S&P 500, we apply various exclusions to create the eligible universe, which is then followed by constituent selection and weighting. Exhibit 3 provides an illustration of the methodology.

Exclusions

Using S&P Global Sustainable1's (S1's) Business Involvement Screens (BIS),[10] the index methodology removes companies involved in certain controversial industries such as oil sands, small arms, military contracting,[11] thermal coal[12] and controversial weapons and tobacco. Further details on the thresholds can be reviewed in the index methodology.

Companies that are deemed non-compliant with the norms and standards of the United Nations Global Compact (UNGC) 10 principles are also excluded.[13, 14]

The methodology also excludes companies that perform poorly when compared to their global industry group peers according to the Global Industry Classification Standard (GICS®). To determine this, a global universe is created by combining constituents from the S&P Global LargeMidCap and S&P Global 1200. Any constituent that falls within the bottom 25% of this global universe by S&P Global ESG Scores is removed.

Constituent Selection and Weighting

Once the exclusions are made, the remaining eligible index constituents in the S&P 500 are selected in the following manner.

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

The index constituents are then weighted by their float-adjusted market capitalization.

Quarterly Eligibility Review

Constituents are reviewed every quarter to ensure they remain eligible for inclusion with regards to their business activities and UNGC compliance. Any company that is deemed ineligible will be removed from the index and not replaced. This process ensures that the

[10] S&P Dow Jones Indices (S&P DJI) announced the transition from the Product Involvement Screens provided by Sustainalytics, to the Business Involvement Screens provided by S&P Global. The new data set effective after the close of April 30, 2024.

[11] Additionally, an expanded and revised list of product involvement exclusions, including oil sands, small arms and military contracting exclusions were announced on April 1, 2022.

[12] A public consultation, ran from March 23, 2020, to May 29, 2020, resulting in excluding companies with more than 5% of revenues generated from thermal coal, the S&P DJI Index Committee announced on June 12, 2020, its decision to implement this new rule via an extraordinary rebalance that would take effect on Sept. 21, 2020.

[13] 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.

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

index reflects any changes to a company's eligibility in a timely manner, and that it maintains adherence to the values of the objectives set within the methodology.

Controversies between Rebalances

When controversies unfold between annual rebalances of the S&P 500 ESG Index, the company's S&P Global ESG Score is reviewed and potentially amended. The S&P DJI Index Committee overseeing the index will then determine whether the company should be removed. Controversies monitored by S&P Global 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 excluded for at least one full calendar year.

Exhibit 3: The S&P 500 ESG Index Methodology Summary

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

Step 1:

Exclude companies involved in thermal coal, tobacco, controversial weapons, small arms, military contracting or oil sands and those that are UNGC non-compliant.

Step 2:

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

Step 3:

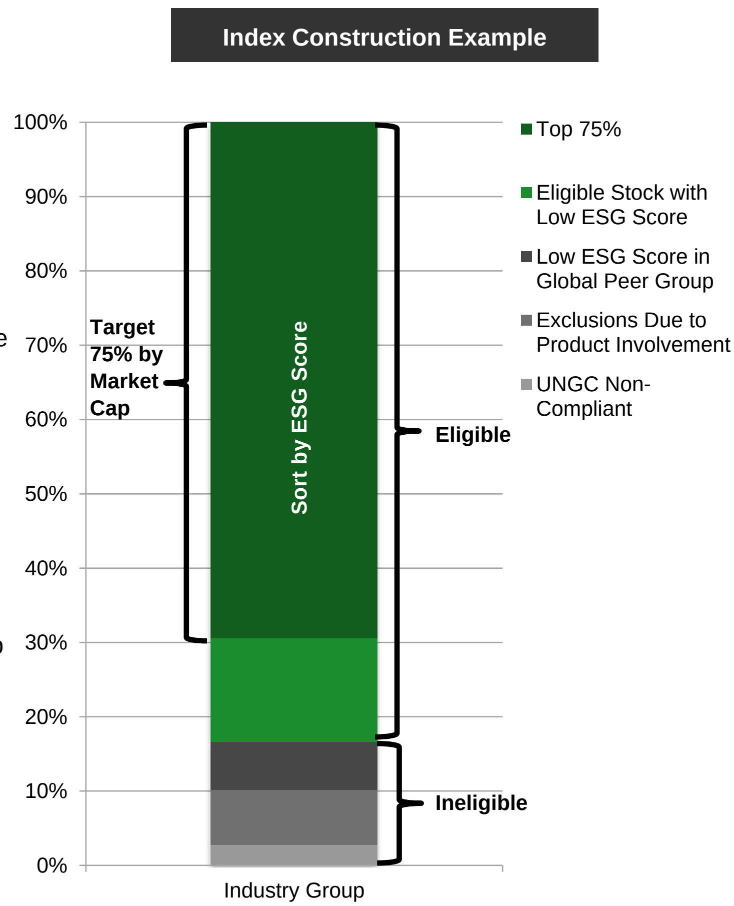
Within the S&P 500, sort the remaining companies by their S&P Global ESG Scores within each GICS industry group.

Step 4:

Starting from the company with the highest S&P Global 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, 177 constituents of the S&P 500 were excluded from the S&P 500 ESG Index, totaling 27.51% of the S&P 500 market capitalization as of the latest rebalance reference date,[15] effective after the close of April 30, 2024. Exhibits 4 and 5 illustrate the reasons behind these exclusions and the exclusion weight.

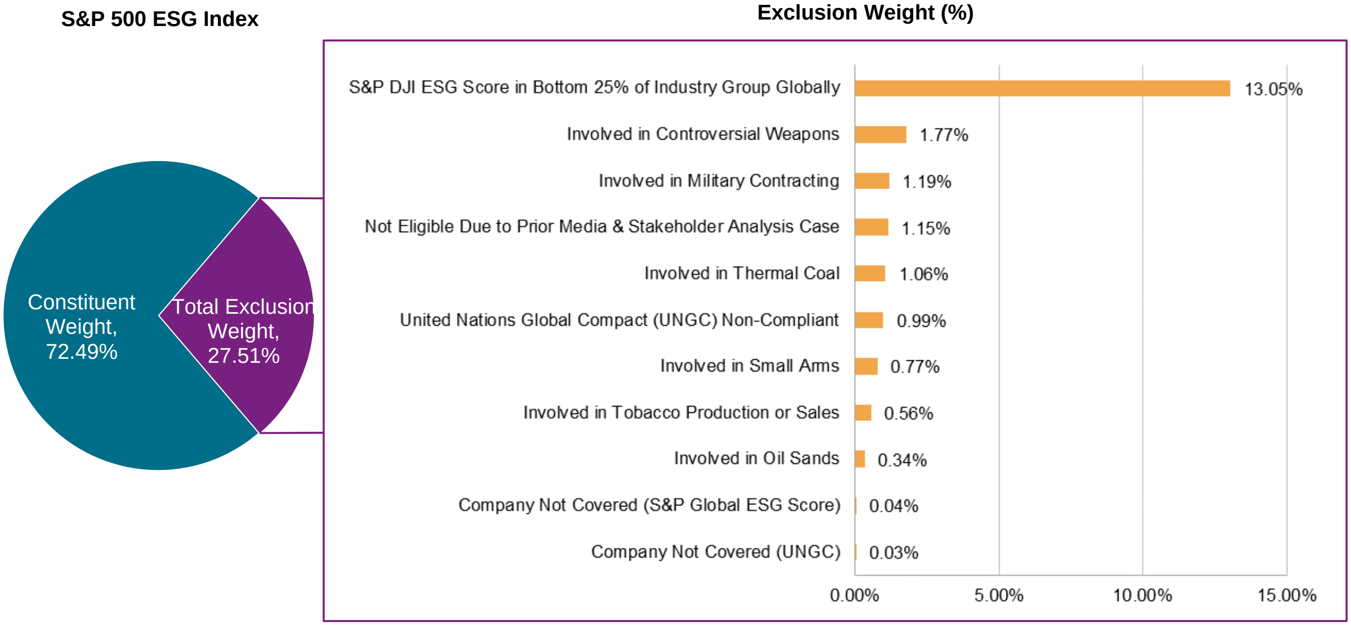
Exhibit 4: Reasons for Exclusions or Non-Selection from the S&P 500 ESG Index

Reason for Exclusion	Number of Stocks	Weight in S&P 500 (%)
Not Part of the Top 75% of Industry Group Market Cap	71	10.32
S&P Global ESG Score in Bottom 25% of Industry Group Globally	72	13.05
Involved in Thermal Coal	17	1.06
Involved in Military Contracting	10	1.19
Involved in Controversial Weapons	12	1.77
Involved in Small Arms	6	0.77
Involved in Tobacco Production or Sales	4	0.56
Involved in Oil Sands	1	0.34
Not Eligible Due to Prior Media & Stakeholder Analysis Case	4	1.15
United Nations Global Compact (UNGC) Non-Compliant	3	0.99
Company Not Covered (UNGC)	1	0.03
Company Not Covered (S&P Global ESG Score)	1	0.04

Source: S&P Dow Jones Indices LLC. Exclusions effective after close of April 30, 2024. Weight as of reference date March 31, 2024. Please refer to the Exclusions file. Table is provided for illustrative purposes. Constituents may be flagged according to multiple exclusion criteria; sums and weights may exceed totals.

[15] Exclusions effective after close of April 30, 2024. Weight as of reference date March 31, 2024. Please refer to the Exclusions file.

Exhibit 5: S&P 500 Index Weight by S&P 500 ESG Index Composition



Source: S&P Dow Jones Indices LLC. Exclusions effective after close of April 30, 2024. Weight as of reference date March 31, 2024. Please refer to the Exclusions file. Charts are provided for illustrative purposes. Constituents may be flagged according to multiple exclusion criteria; sums and weights may exceed totals.

Results & Performance

S&P Global ESG Score Improvement

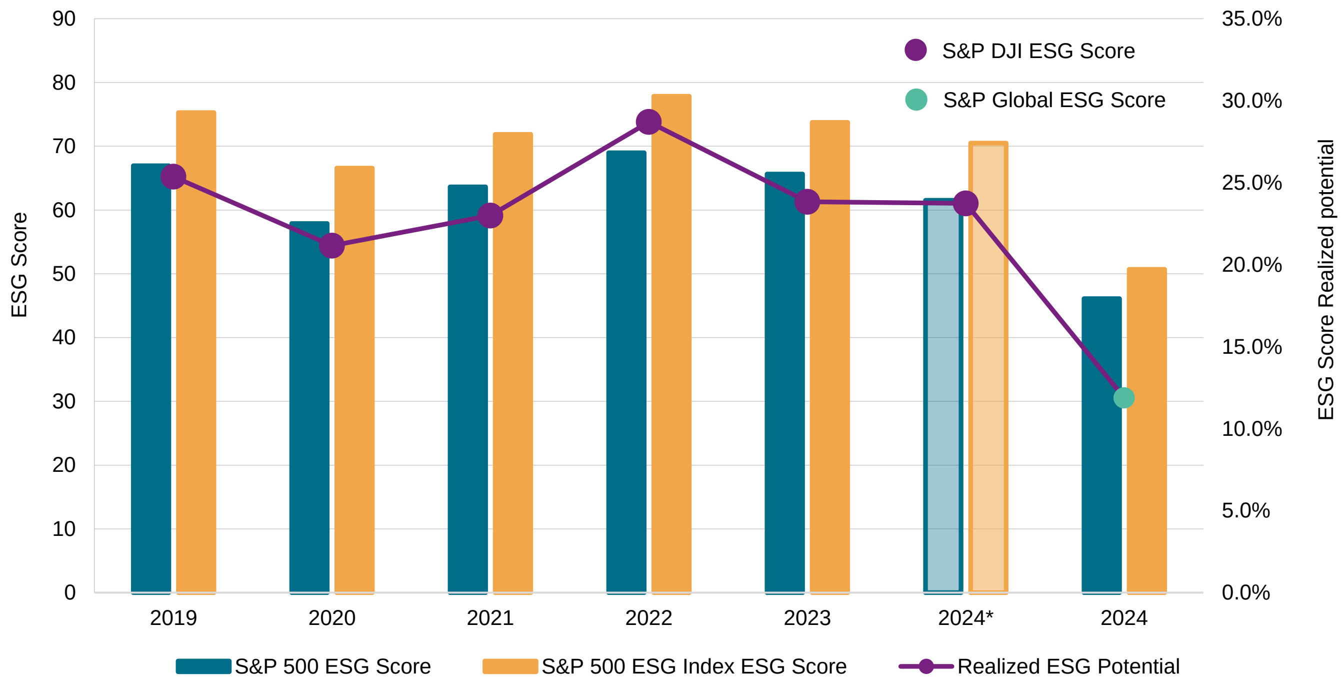
Historically, the S&P 500 ESG Index has maintained similar risk/return levels to its benchmark, the S&P 500, while incorporating numerous sustainability enhancements. In the latest rebalance, the index achieved an absolute 4.60% increase in its aggregate S&P Global ESG Score.

The "realized ESG potential" measures the extent to which the ESG index improved its score compared to if it were solely investing in the highest-ranked company. In practice, diversification requirements would make this approach undesirable; however, this metric provides context to the absolute improvement in the S&P Global ESG Score relative to the benchmark universe's starting characteristics. For the S&P 500 ESG Index, it has realized over 11.87% of the benchmark's ESG potential, indicating a significant boost for an ESG index that has historically delivered benchmark-like returns.[16]

[16] This realized ESG potential is calculated as the percentage difference between the aggregate S&P Global ESG Scores of the S&P 500 ESG Index and the S&P 500 relative to the strategy's maximum potential ESG improvement based on investing only in the single highest-ranked ESG scoring company in the benchmark. The S&P 500 ESG Index represents 11.87% ((4.60)/ (99.82-68.90)) of the possible ESG improvement that the index could achieve (99.82 is the highest score in the S&P 500).

The transition to S&P Global ESG Scores[17] ensured that the S&P 500 ESG Index continued to utilize the most rigorous and high-quality data available. This transition eliminates size bias and introduces a modeling approach based on industry correlations, resulting in a more normalized distribution of scores compared to the previous S&P DJI ESG Scores. Consequently, there are fewer companies that score highly when using the S&P Global ESG Scores framework. Exhibit 6 provides a visual representation of the ESG Scores of the S&P 500 ESG Index compared to the S&P 500, along with the realized potential at each rebalance date throughout the index's life.

Exhibit 6: ESG Score Improvement of the S&P 500 ESG Index versus the S&P 500



*Hypothetical scenario using composition effective after the close of April 30, 2024, and S&P DJI ESG Scores.
Source: S&P Dow Jones Indices LLC. Data from April 30, 2019, to April 30, 2024. For April 30, 2024, S&P Global ESG Scores were used, prior to April 30, 2024, rebalance, the S&P DJI ESG Scores were applied. Past performance is no guarantee of future results. Chart is provided for illustrative purposes.

Reflected Benefits of the S&P 500 ESG Index versus the S&P 500

Perhaps more interesting still are the additional tangible metrics represented by the enhanced sustainability profile of the S&P 500 ESG Index versus the S&P 500. Indeed, the S&P Global ESG Scores consider a wide range of sustainability metrics, incorporating up to 1,000 real-world data points for each assessed company. A small sampling of these enhancements is highlighted in Exhibit 7.

[17] Transitioning S&P Sustainability Indices to S&P Global ESG Scores and Business Involvement Screens (spglobal.com)

This subset of ESG impacts achieved by the S&P 500 ESG Index relative to the S&P 500 underpin the true value of this index. These benefits could enable market participants to comfortably align their investments with their values, without necessarily compromising their overall investment objectives.

Exhibit 7: Reflected Benefits of the S&P 500 ESG Index versus the S&P 500

Environmental

Climate Strategy

11% higher exposure to companies that have climate-related issues integrated into overall risk management; identified climate change risks and opportunities; reported on emission reduction activities; provided low-carbon products and/or enabled a third party to avoid GHG emissions (avoided emissions); targets and initiatives in place to reduce the emissions; provided incentives for achieving targets in relation to management of climate change issues.

Environmental Policy and Management Systems

9% higher exposure to companies that have a public environmental policy covering operations, corporate processes and supply chain; and have a certified and audited Environmental Management System; have disclosed significant fines or penalties paid relating to the environment or ecology.

Product Stewardship

8% higher exposure to companies that consider environmental criteria in the development of new products (and services); disclose environmental impacts covered by product life cycle assessment, percent of raw materials used from renewable resources (natural or bio-based); have disclosed a commitment to reduce or phase-out hazardous substances in its products and disclose resource efficiency benefits during their use phase to customers and consumers.

Social

Talent Attraction and Retention

10% higher exposure to companies that disclose the type and coverage of the individual performance appraisals used for individual performance-related compensation; provide long-term incentives (tied to an employee's performance) for employees below the senior management level (more than two management levels away from the CEO); have a percentage of actively DC engaged employees and have implemented a recognized and scaled approach to measuring actively engaged employees.

Human Capital Development

10% have exposure to companies that quantitatively measure the benefits from their investments linked to specific employee development programs, including estimating the cost savings and the increase in sales per monetary unit spent.

Occupational Health and Safety

9% higher exposure to companies that ensure effective governance of health risks and have made their health and safety performance indicators (specifically work-related injuries) publicly available and externally verified, including employees and contractors.

Governance and Economics

Information Security/ Cybersecurity and System Availability

11% higher exposure to companies that have processes in place to prevent IT system interruptions and cyberattacks; a director on the board with relevant background engaged on the cybersecurity strategy process; implemented policies and procedures for all employees to ensure that they are aware of threat issues and the importance of information security/cybersecurity; have been successful in managing information security/cybersecurity risks.

Risk and Crisis Management

11% higher exposure to companies that promote and enhance an effective risk culture throughout their organizations; have identified long-term emerging risks that have a significant impact on business in future; have taken mitigating actions in light of these risks; perform sensitivity analysis and stress testing on a group level, including risks related to climate change and water availability and/or quality.

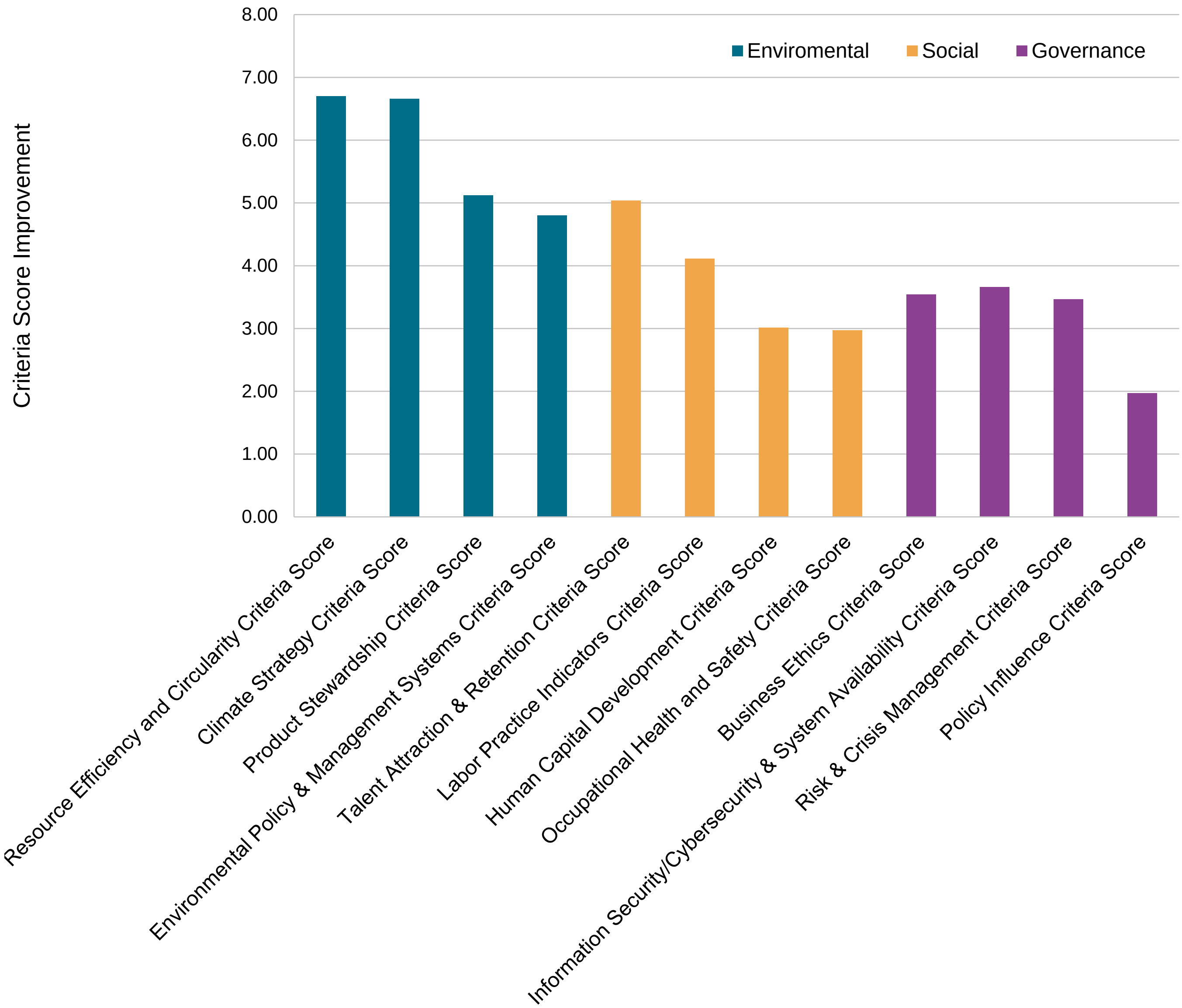
Policy Influence

11% higher exposure to companies that publicly disclose their monetary contributions to and spending for political campaigns, political organizations, lobbyists, or lobbying organizations.

Source: S&P Dow Jones Indices LLC. These are just a few examples of the numerous ways in which the S&P 500 ESG Index offers enhanced ESG representation. Increased index exposure to each ESG theme in the metrics above is calculated using the question-level data in S&P Global's CSA (2023 methodology year). These metrics are calculated using index data as of April 30, 2024, as the percentage difference between the performance of the S&P 500 ESG Index and its underlying index constituents across these metrics, on a weighted average basis. Chart is provided for illustrative purposes.

Over the past five years, the S&P 500 ESG Index has shown significant sustainability improvements in comparison to the S&P 500. Exhibit 8 demonstrates the index's active performance across the three dimensions: environmental, social and governance, considering the weighted average of selected criteria-level scores from Jan. 28, 2019, to May 1, 2024. These absolute criteria level score enhancements reflect the impact of sustainable practices integrated into the index.

Exhibit 8: Active Criteria Score Improvements of the S&P 500 ESG Index versus the S&P 500



Source: S&P Dow Jones Indices LLC. Source for criterial level scores: S&P Global Sustainable 1. Companies are assessed, on average, across 23 different industry-specific criteria. These are examples selected from over 100 different possible criteria spanning the three dimensions. Analysis carried out using Portfolio Analytics of S&P Capital IQ. Chart is provided for illustrative purposes.

Risk-Adjusted Performance Profiles

The objective of the S&P 500 ESG Index is to enhance allocation to companies with improved sustainability characteristics, while maintaining broad and diversified exposure, which has historically provided benchmark-like performance. As the risk-adjusted performance metrics over a one-, three- and five-year time horizon demonstrate, the index has had a realized tracking error between 1% and 2%, similar volatility and some welcome outperformance over the benchmark S&P 500 (see Exhibit 9).

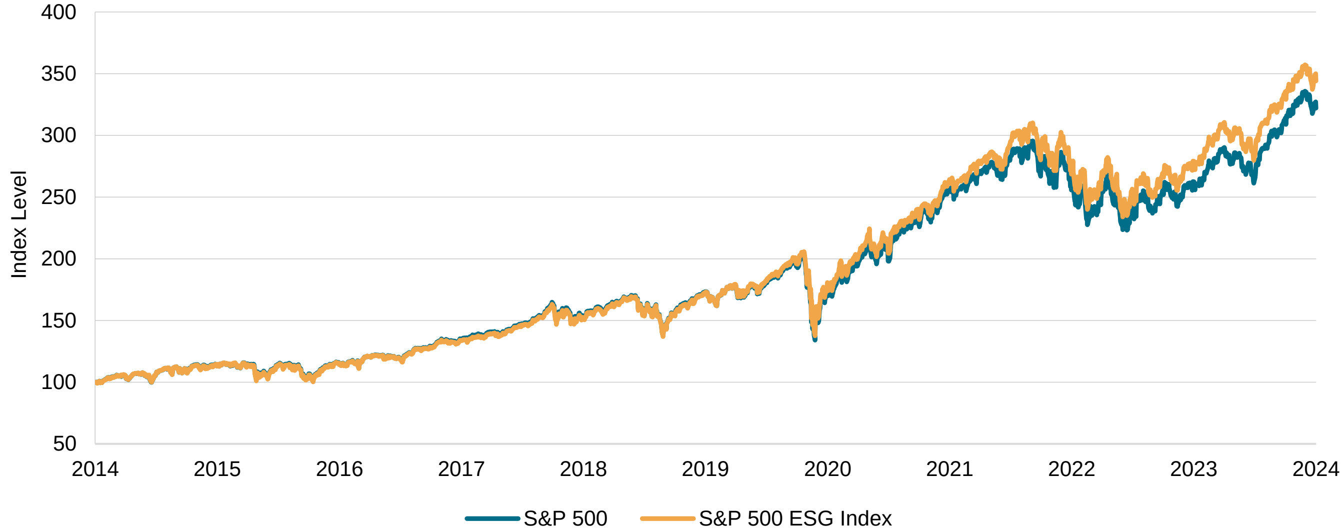
Exhibit 9: Performance Characteristics of the S&P 500 ESG Index versus the S&P 500

Category	S&P 500	S&P 500 ESG Index
Number of Constituents	503	324
Float-Adjusted Market Cap (USD Billions)	42,234	30,660
Annualized Total Returns (%)		
10-Year	12.41	13.15
5-Year	13.19	14.75
3-Year	8.06	9.49
1-Year	22.66	23.29
Excess Returns (%)		
10-Year	-	0.75
5-Year	-	1.56
3-Year	-	1.42
1-Year	-	0.63
Annualized Risk (%)		
10-Year	15.25	15.30
5-Year	18.48	18.58
3-Year	17.65	18.00
Realized Tracking Error (%)		
10-Year	-	1.11
5-Year	-	1.34
3-Year	-	1.40
1-Year	-	1.34

Source: S&P Dow Jones Indices LLC. Data prior to the open on May 1, 2024. Past performance is no guarantee of future results. Index performance based on total return in USD. The S&P 500 ESG Index was launched Jan. 28, 2019. All data prior to index launch 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.

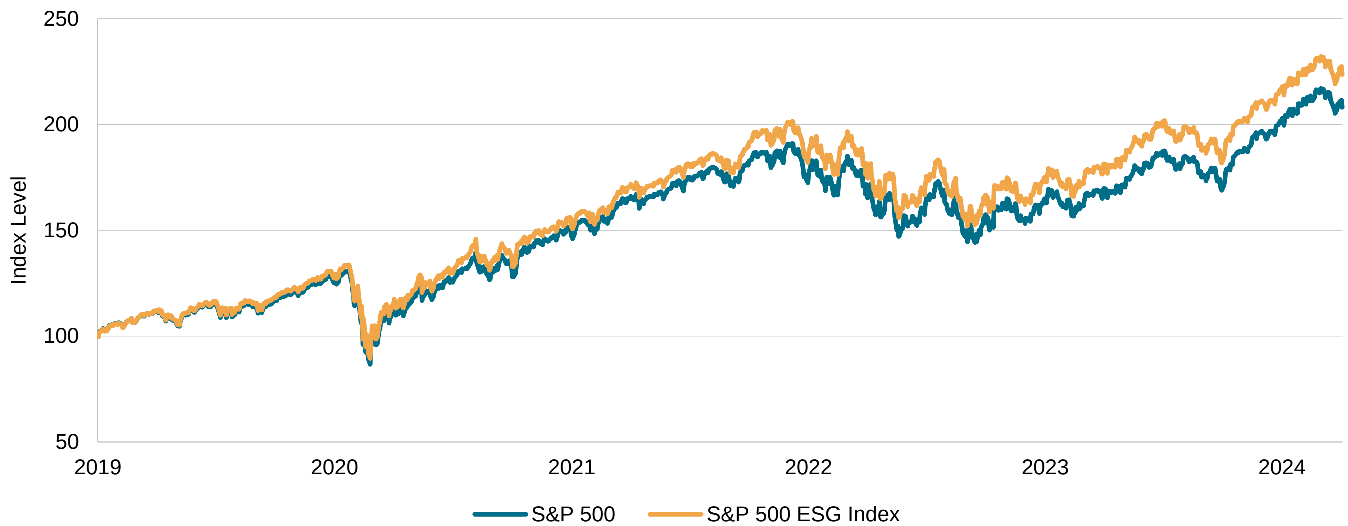
Exhibits 10 and 11 further illustrate the performance profile of the S&P 500 ESG Index relative to the S&P 500 over the historical 10-year and live 5-year timeframes (given that the index was launched in 2019). Despite excluding more than 27% of the constituents in accordance with the rules-based eligibility and selection criteria, the S&P 500 ESG Index achieved a similar return profile to the S&P 500.

Exhibit 10: 10-Year Historical Back-Tested Performance of the S&P 500 ESG Index versus the S&P 500



Source: S&P Dow Jones Indices LLC. Data from April 30, 2014, to April 30, 2024. Index level rebased to 100 as of April 30, 2014. Index performance based on daily total return in USD. Past performance is no guarantee of future results. The S&P 500 ESG Index was launched Jan. 28, 2019. All data prior to index launch is back-tested hypothetical data. Chart is provided for illustrative purposes and reflects hypothetical historical performance. Please see the Performance Disclosure at the end of this document for information regarding the inherent limitations associated with back-tested performance.

Exhibit 11: Live Performance of the S&P 500 ESG Index versus the S&P 500



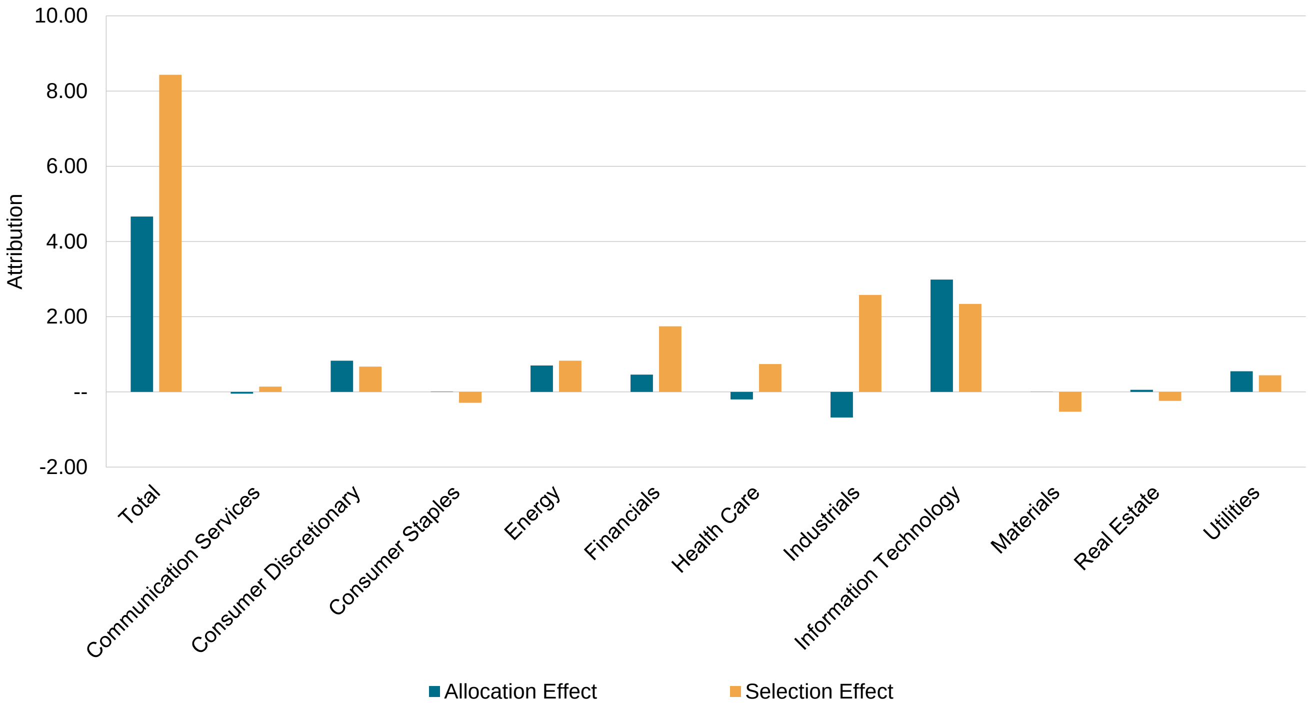
Source: S&P Dow Jones Indices LLC. Data from Jan. 28, 2019, to April 30, 2024. Index performance based on daily total return in USD. Past performance is no guarantee of future results. Chart is provided for illustrative purposes.

The low tracking error and 10-year historical performance profile demonstrates that the S&P 500 ESG Index has been highly correlated to the benchmark. However, it is worth paying special attention to its live performance. For instance, since the index was launched in January 2019, it had a 16.54% annualized return as of April 30, 2024, versus the S&P 500 at 14.96%. Over the one-year period from April 2023 to April 2024, the ESG index achieved an excess return of 0.63%, while remaining close to the benchmark with a 1.34% tracking error.

Performance Attribution: A Story of Selection

In addition to having many similar characteristics to the benchmark index, the S&P 500 ESG Index has also provided some welcome outperformance since its launch in 2019. Interestingly, the historical outperformance of the index was not necessarily due to active exposure to specific sectors, as many suppose. Instead, the stock selection effect, as determined by the index methodology, was the primary driver of outperformance over the five-year period. This is perhaps unsurprising, as the index construction lends itself to a broadly sector-neutral outcome, resulting in a small allocation effect. To recap, after applying various exclusions, the methodology targets 75% of the market cap within each industry group in the S&P 500, selecting the highest-ranking ESG performers by S&P Global ESG Score. Since constituents are then weighted by market capitalization, the methodology essentially sifts through the largest companies for the ESG index to perform in line with its objective.

Exhibit 12: Five-Year Performance Attribution of the S&P 500 ESG Index versus the S&P 500



Source: S&P Dow Jones Indices LLC, FactSet. Data From Jan. 28, 2019, to April 30, 2024. Index performance based on daily total return in USD. Past performance is no guarantee of future results. Chart is provided for illustrative purposes.

The rules-based exclusion and selection criteria used by the S&P 500 ESG Index resulted in the selection of certain companies that also drove significant performance for the S&P 500. However, exact sector neutrality is not always achieved and, as a result, an allocation effect also plays an important role over shorter time periods.

The importance of higher or lower ESG-scoring constituents in generating excess return has been discussed in our blog "The Key to the S&P 500 ESG Index's Outperformance: Avoiding the 'Worst.'"[18] Here, the analysis showed that underweighting the lowest ESG-scoring constituents contributed the most to the index's outperformance.

Conclusion

The launch of the S&P 500 ESG Index five years ago marked a watershed moment in the landscape of sustainable investing. By offering a broad-based, sustainability-focused measure of U.S. equities, the index continues to cement its position as a common starting point for ESG investors around the world focused on this market segment. While exhibiting desirable sustainability characteristics—such as stronger commitments to reduce greenhouse gas emissions, enhanced workforce diversity and enhanced anti-corruption and bribery policies—the index has historically delivered low levels of tracking error and benchmark-like returns. The index thus allows market participants to align their values with their investments and integrate sustainability considerations into the core of their strategies. As a sustainable complement for the iconic S&P 500, the S&P 500 ESG Index helps elevate ESG investing from the margins to the mainstream.

[18] Maya Beyhan. Jan. 18, 2023. S&P Dow Jones Indices Indexology Blog. The Key to the S&P 500 ESG Index's Outperformance: Avoiding the "Worst"

Performance Disclosure/Back-Tested Data

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 http://www.spglobal.com/spdji/. Past performance of the Index is not an indication of future results. 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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