The S&P 500® ESG Index: Defining the Sustainable Core

Contributors

Reid Steadman
Managing Director
Global Head of ESG Indices
reid.steadman@spglobal.com

Mona Naqvi
Senior Director
Head of North America ESG Product Strategy
mona.naqvi@spglobal.com

Dan Perrone
Director
Head of ESG Index Operations
daniel.perrone@spglobal.com

Margaret Dorn
Senior Director
ESG Client Engagement North America
margaret.dorn@spglobal.com

INTRODUCTION

The launch of the S&P 500 ESG Index in April 2019 signaled an evolution in sustainable investing. Indices based on environmental, social, and governance (ESG) data were no longer simply a means for companies to declare their sustainability credentials or tools to manage tactical investments playing a minor role in investors' portfolios. The S&P 500 ESG Index and other such indices were built to underlie strategic, long-term mainstream investment products.

For decades, the prospect of inclusion in ESG indices like the Dow Jones Sustainability Indices has encouraged companies to manage their businesses with various stakeholders and objectives in mind. However, these pioneering, best-in-class indices tended to be narrow, including only a small selection of the top ESG performers. This presented challenges to individual and institutional investors who were concerned about the risks inherent in highly concentrated portfolios defined by these indices.

The S&P 500 ESG Index addressed the need for an index that incorporates ESG values while offering benchmark-like performance. Intentionally broad—including over 300 of the original S&P 500 companies—the S&P 500 ESG Index reflects many of the attributes of the S&P 500 itself, while providing an improved sustainability profile.

This paper outlines the characteristics of the S&P 500 ESG Index that have appealed to investors, including:

- The easy-to-understand methodology behind the index;
- How "financial materiality" drives index construction;
- The similar risk/return profiles of the S&P 500 ESG Index and the S&P 500;
- How the ESG characteristics of the S&P 500 ESG Index are improved compared with those of the S&P 500; and
- Specific examples demonstrating how the S&P 500 ESG Index methodology sorts and selects companies.

THE S&P DJI ESG SCORES: BUILDING BLOCKS FOR INDICES

The key to understanding the S&P 500 ESG Index is the data that determines its composition, in particular, the S&P DJI ESG Scores.

The S&P DJI ESG Scores are based on data gathered over two decades by SAM, part of S&P Global.

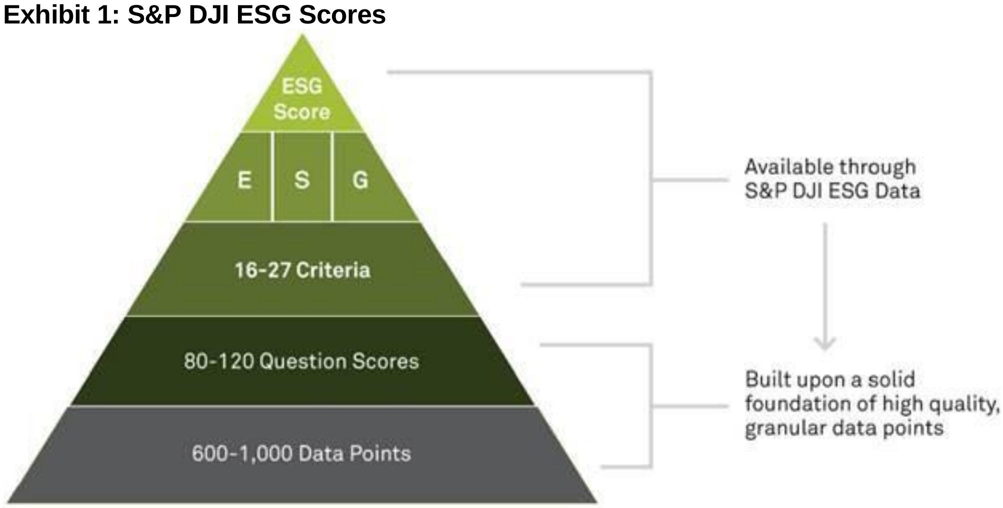
The S&P DJI ESG Scores are based on data gathered over two decades by SAM, part of S&P Global, which publishes ESG scores based on data gathered through the Corporate Sustainability Assessment (CSA). The CSA has become a leading standard in its own right as the definitive guidebook and grading system for corporations, quantifying their progress on sustainability topics and their ESG performance in relation to their peers.

In January 2020, S&P Global acquired SAM, the ESG data collection and scoring unit of the Zurich-based active manager, RobecoSAM. This acquisition further enhanced S&P Global's capabilities in ESG and built on its strong ties with companies already familiar with S&P Global through its credit ratings, benchmarks, and market data businesses.

The granular, industry-specific data SAM gathers through the CSA directly from companies differentiates the S&P DJI ESG Scores from other ESG scores, which rely on data only from public sources."

The granular, industry-specific data SAM gathers through the CSA *directly from companies* and from publicly available sources differentiates the S&P DJI ESG Scores from other ESG scores that rely only on data from public sources. Because S&P Global directly interacts with companies, it is able to collect 600-1,000 data points per company. These data points are then transformed into four levels of scores, highlighted in Exhibit 1.

Exhibit 1: S&P DJI ESG Scores



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

The scoring approach employed to derive the S&P DJI ESG Scores is rooted in the principle of financial materiality: that companies should be assessed according to the sustainability issues that are most likely to arise and to have the greatest impact on companies in their industry.

SAM was able to identify financially material factors uniquely relevant to 61 different industries.

In the course of its long history and through investment experience[1] using the granular data it collected, SAM was able to identify financially material factors uniquely relevant to 61 different industries. Collecting and scoring data according to these factors ensures that companies included in the S&P 500 ESG Index have been measured based on the sustainability issues that are most relevant to them. This is done by weighting issues according to their relevance, industry by industry, as determined by how likely issues are to arise and their level of impact if they do. Exhibit 2 shows how weights assigned to issues in different industries can vary greatly based on financial materiality.

Exhibit 2: Financially Material Issues in Select Industries

Mining & Minerals	Restaurants	Pharmaceuticals
•Payment transparency	•Brand management •Customer relationship Management	•Innovation mgmt. •Product quality and recall mgmt.
•Mineral waste mgmt. •Water related risks •Biodiversity	•Raw material sourcing	•Climate strategy
•Asset closure mgmt. •Community impact •Stakeholder engagement	•Local impact of business operations	•Address cost burden •Access to drugs •Health outcome contributions

Source: SAM, part of S&P Global. Chart is provided for illustrative purposes.

If a company does not report on a given issue, but a standard for transparency has not been reached on this issue, the weight of the question is redistributed to other questions.

Once initial weights are assigned, two important refinements are made to ensure scores are suitable for use in an index.[2] First, an adjustment is made to the weights of the scores in order to address information gaps that may exist for companies that do not participate directly in the CSA. If a company does not report on a given issue, but a standard for transparency has not been reached on this issue in its industry, the company is not penalized for this missing data by receiving a zero.[3] Instead, the weight of the question is redistributed to other questions.

[1] SAM was originally part of RobecoSAM, an active investment manager, and gathered ESG data to inform RobecoSAM's portfolio managers' investment decisions.

[2] The S&P Global ESG Scores, which are used in the Dow Jones Sustainability Index, are similar to the S&P DJI ESG Scores but do not include an adjustment for transparency or undergo normalization.

[3] S&P DJI's transparency standard and other information regarding the S&P DJI ESG Scores can be found in "Frequently Asked Questions: S&P DJI ESG Scores."

The S&P DJI ESG Scores are normalized at the industry level to ensure that the scores of companies are comparable.

Second, the S&P DJI ESG Scores are normalized at the industry level to ensure that the scores of companies are comparable, as certain industries can have scores that are tightly grouped or skewed relative to the scores of companies in other industries measured against different criteria. This normalization ensures companies' relative positions are comparable for screening, sorting, and selecting index constituents.

These adjustments, in addition to direct access to data through the CSA and the identification of financially material factors, make the S&P DJI ESG Scores the most innovative scores used in indices today.

Index Construction

The S&P 500 ESG Index leverages the S&P DJI ESG Scores and other data to define its constituents.

The S&P 500 ESG Index leverages the S&P DJI ESG Scores and other data to define its constituents. Using the rules set forth in this section, the index is rebalanced on an annual basis, after the close of trading on the last business day of April.[4]

The index methodology was developed 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, according to the S&P DJI ESG Scores and other relevant ESG data, while including companies that are doing so.

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.

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, resulting in a benchmark-like risk/return profile.

METHODOLOGY SUMMARY

Exclusions

Companies are eliminated that:

- 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.
- Produce tobacco, 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.

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

- 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.

Since Sept. 21, 2020, companies deriving more than 5% of their revenues from thermal coal have been excluded from the S&P 500 ESG Index.

- Have a UN Global Compact (UNGC) score that is in the bottom 5% of scores in the eligible universe.[5,6]

In addition, as of Sept. 21, 2020, companies deriving more than 5% of their revenues from thermal coal have been excluded from the S&P 500 ESG Index. This new exclusion is the result of a formal consultation process to determine whether investors using the S&P 500 ESG Index saw this exclusion as desirable and consistent with the index's objectives. In the future, S&P DJI may conduct further consultations regarding exclusions and other methodological points to ensure the S&P 500 ESG Index remains relevant and useful to a broad array of investors.

Constituent Selection and Weighting

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 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.

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.

Controversies between Rebalances

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 excluded for at least one full calendar year.

[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] Calculated by Arabesque.

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 DJI ESG Score.

Step 1:

Exclude companies involved in thermal coal, 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:

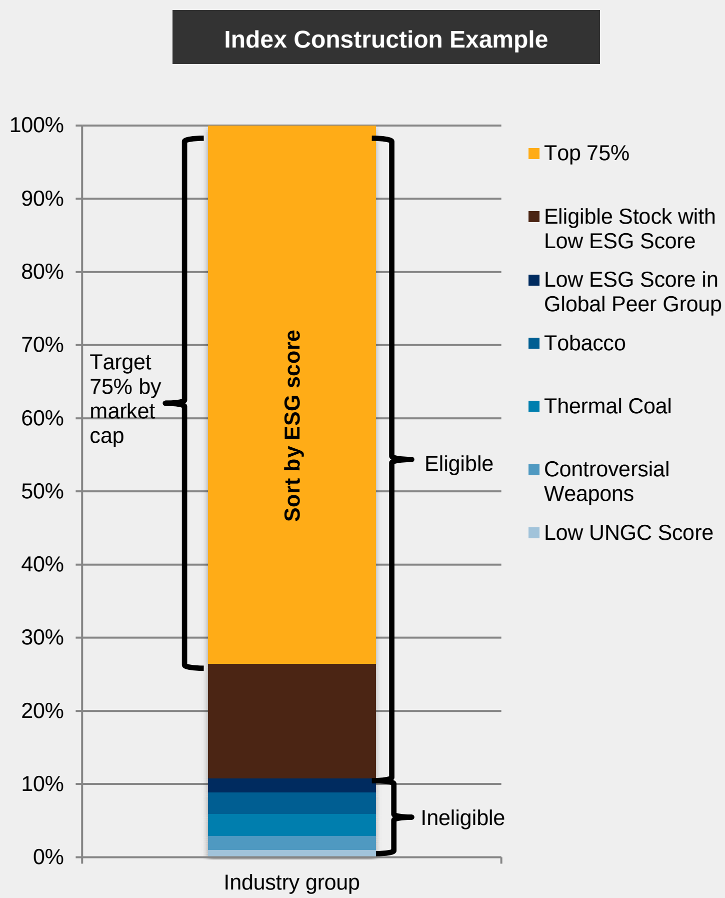
Within the S&P 500, sort the remaining companies by their S&P DJI ESG Scores within each GICS industry group.

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, 206 constituents of the S&P 500 were excluded from the S&P 500 ESG Index, totaling 25.20% of the S&P 500 market capitalization as of Sept. 30, 2020. Exhibit 4 ranks the reasons behind these exclusions.

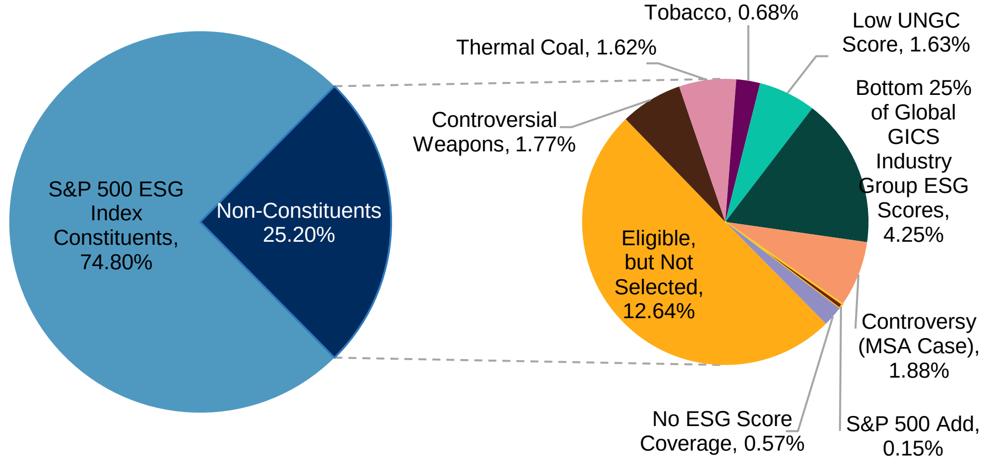
Exhibit 4: Reasons for Exclusion from the S&P 500 ESG Index

REASON FOR EXCLUSION	NUMBER OF EXCLUSIONS	WEIGHT IN S&P 500 (%)
Eligible but Not Selected (Not Part of the Top 75% of Industry Group Market Cap)	125	12.64
S&P DJI ESG Score in Bottom 25% of Industry Group Globally	34	4.25
Not Eligible Due to Prior Media & Stakeholder Analysis Case	3	1.88
Involved in Controversial Weapons	9	1.77
UNGC Score Too Low	5	1.63
Involved in Thermal Coal	17	1.62
Involved in Tobacco Production or Sales	2	0.68
No ESG Score	8	0.57
Added to the S&P 500 after Rebalance Reference Date	3	0.15

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

Overall, 206 constituents of the S&P 500 were excluded from the S&P 500 ESG Index, totaling 25.20% of the S&P 500 market capitalization as of Sept. 30, 2020.

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



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

RESULTS & PERFORMANCE

Absolute S&P DJI ESG Score Improvement

The S&P 500 ESG Index attained an absolute ESG score increase of 8.90% relative to the benchmark overall, realizing more than 20.90% of the ESG potential of the benchmark universe.

By design, the S&P 500 ESG Index maintains similar levels of risk and return to the benchmark S&P 500, alongside numerous stainability enhancements. At the index level, it achieved an 8.90% increase in its aggregate S&P DJI ESG Score as of the last rebalance.

Realized ESG Potential

These key ESG performance indicators underpin the value of the S&P 500 ESG Index.

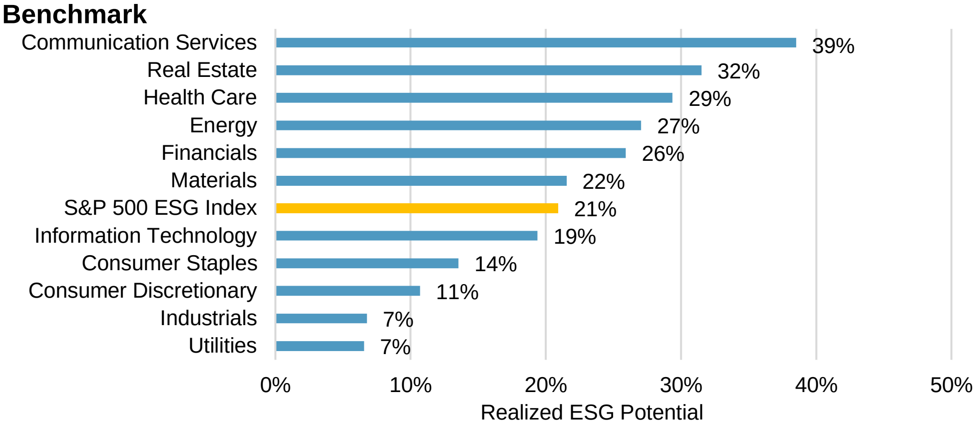
Another useful metric is the “realized ESG potential” of the index. This depicts how much of an S&P DJI ESG Score improvement was achieved by the ESG index, relative to the maximum possible improvement that could have been attained by investing solely in the single highest-ranked company in terms of S&P DJI ESG Score. While diversification requirements would make this approach undesirable in practice, it is nevertheless an interesting metric to contextualize the absolute S&P DJI ESG Score improvement relative to the starting characteristics of the benchmark universe. For example, in markets where companies are generally sustainable to begin with, it is harder to obtain a substantial increase in absolute S&P DJI ESG Score without incurring a loss of diversification and higher levels of tracking error. According to this measure, the S&P 500 ESG Index has realized more than 20.90% of the ESG potential of the benchmark, representing a meaningful boost for an ESG index that still provides benchmark-like returns.[7]

[7] This realized ESG potential is calculated as the percentage difference between the aggregate S&P DJI 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 20.90% ((8.90)/(98.84-56.25)) of the possible ESG improvement that the index could achieve (98.84 is the highest score in the S&P 500).

The realized ESG potential measures the ESG score improvement achieved relative to the possible improvement that could have been attained by investing solely in the top ranked company by S&P DJI ESG Score.

However, while these metrics provide a good snapshot of the overall benefits, the industry-specific nature of S&P DJI ESG Scores—driven by a materiality-weighted scoring framework—means such index-level measures may miss the true benefits captured within each sector. Therefore, Exhibit 6 highlights the realized ESG potential across sectors and demonstrates how several sectors achieved a much bigger boost in sustainability profile than the S&P 500 ESG Index achieved overall. Further research is required to understand what might be driving this dispersion in sector-level improvements.

Exhibit 6: Realized ESG Potential of the S&P 500 ESG Index versus the Benchmark



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

The S&P 500 ESG Index realized more than 20.90% of the ESG potential of the benchmark, but it underperformed some individual sectors.

Real-World Benefits

Perhaps more interesting still are the real-world benefits represented by the enhanced sustainability profile. Indeed, the S&P DJI ESG Scores account for myriad underlying sustainability metrics, driven by up to 1,000 real-world data points per company assessed. The sustainability benefits of the S&P 500 ESG Index are thus simply too numerous to convey in a single white paper. Nevertheless, a small sampling of these enhancements are highlighted in Exhibit 7.

This small subset of the numerous, measurable, and positive ESG impacts of the S&P 500 ESG Index relative to the S&P 500 underpin the true value of this index. These benefits, coupled with benchmark-like returns, thereby enable market participants to comfortably align their investments with their values, without necessarily compromising their overall investment objectives.

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

Environmental		Social		Governance	
8%	Exposure to companies that have identified climate change-related opportunities and estimated their costs and positive financial implications	11%	Exposure to companies actively monitoring and disclosing diversity-related metrics	6%	Exposure to companies that publicly disclose their political and lobbying contributions
12%	Exposure to companies with third-party verified GHG emission and energy consumption data	5%	Exposure to companies that measure employee engagement with a breakdown based on gender	7%	Exposure to companies that implemented a stringent privacy policy across their operations and suppliers
7%	Exposure to companies with GHG emission reduction targets	8%	Exposure to companies assessing human rights issues across their operations, contractors, and first-tier suppliers	6%	Exposure to companies that give customers the ability to decide how their private data is collected, used, and retained

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 are calculated using the question-level data in SAM's CSA (2019 methodology year). These metrics are calculated using index data as of Sept. 30, 2020 as the percentage difference between the performance of the S&P 500 ESG Index and the S&P 500 constituents across these metric, on a weighted average basis. Chart is provided for illustrative purposes.

Risk/Return 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, in an effort to provide benchmark-like returns. As the risk/return metrics over a one-, three-, and five-year time horizon demonstrate (see Exhibit 8), the index has indeed delivered on its objective—with realized tracking errors consistently around 1%, almost identical volatility, and some welcome outperformance over the benchmark S&P 500.

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Exhibit 8: 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	505	299
Float-Adjusted Market Cap (USD Billions)	27,868	20,846
ANNUALIZED TOTAL RETURNS (%)		
10-Year	13.74	14.05
5-Year	14.15	15.00
3-Year	12.28	13.79
1-Year	15.15	18.09
EXCESS RETURNS (%)		
10-Year	-	0.31
5-Year	-	0.85
3-Year	-	1.51
1-Year	-	2.94
ANNUALIZED RISK (%)		
10-Year	13.25	13.07
5-Year	14.88	14.79
3-Year	17.74	17.58
REALIZED TRACKING ERROR (%)		
10-Year	-	0.98
5-Year	-	0.95
3-Year	-	1.09
1-Year	-	1.51

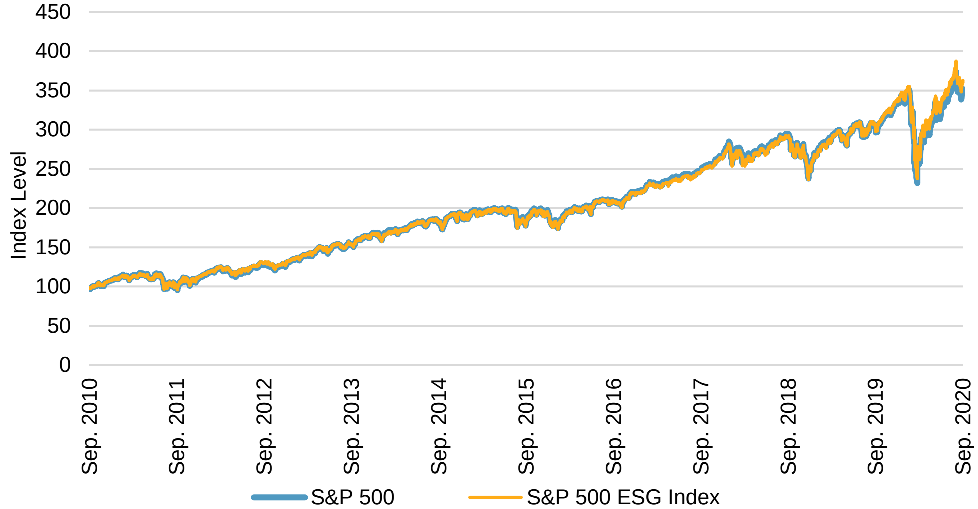
Source: S&P Dow Jones Indices LLC. Data as of Sept. 30, 2020. Past performance is no guarantee of future results. Table is provided for illustrative purposes and reflects hypothetical historical performance. Please see the Performance Disclosure at the end of this document for more information regarding the inherent limitations associated with back-tested performance.

Despite excluding more than 25% of the constituents according to rules-based eligibility and selection criteria, the S&P 500 ESG Index achieved a similar return profile to the S&P 500, along with a myriad of sustainability enhancements.

Exhibits 9 and 10 further illustrate the return profile of the S&P 500 ESG Index relative to the S&P 500, over the 10-year and 1-year timeframes, while the latter shows the live performance record, given that the index launched in 2019. Despite excluding more than 25% of the constituents according to rules-based eligibility and selection criteria, the S&P 500 ESG Index achieved a similar return profile to the S&P 500, along with a myriad of sustainability enhancements.

The 10-year historical return profile demonstrates that the S&P 500 ESG Index generally succeeded in targeting the performance of the benchmark

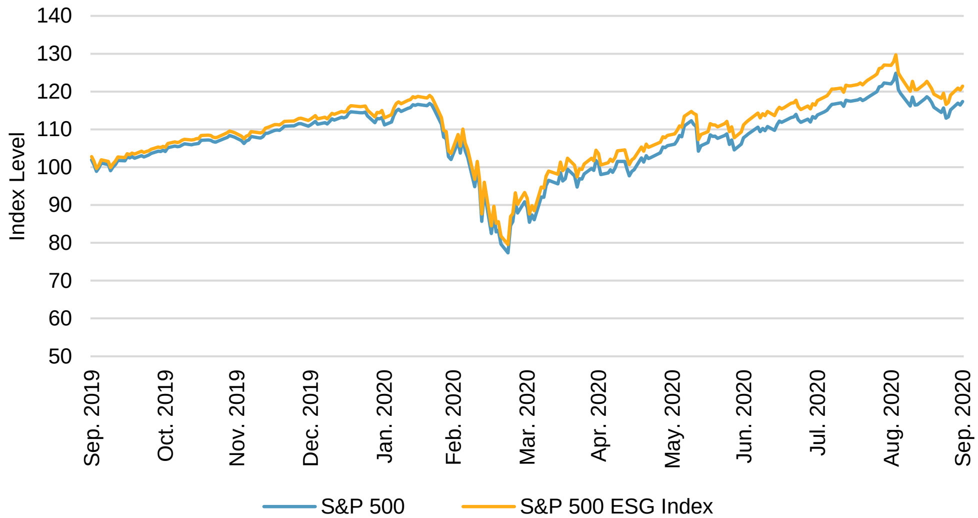
Exhibit 9: 10-Year Historical Returns of the S&P 500 ESG Index versus the S&P 500



Source: S&P Dow Jones Indices LLC. Data from Sept. 30, 2010, to Sept. 30, 2020. Index performance based on daily total return in USD. 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 information regarding the inherent limitations associated with back-tested performance.

Over the past year when the index was live, notwithstanding turbulent markets, the strategy achieved an excess return of 2.94%, while remaining close to the benchmark with 1.51% tracking error.

Exhibit 10: One-Year (Live) Performance of the S&P 500 ESG Index versus the S&P 500



Source: S&P Dow Jones Indices LLC. Data from Sept. 30, 2019, to Sept. 30, 2020. Index performance based on daily total return in USD. Past performance is no guarantee of future results. Chart is provided for illustrative purposes.

The 10-year historical return profile demonstrates that the S&P 500 ESG Index generally succeeded in targeting the performance of the benchmark S&P 500. However, it is worth paying special attention to the past year, when the index was live. Over this timeframe, notwithstanding turbulent markets, the ESG index achieved an excess return of 2.94%, while remaining close to the benchmark with a 1.51% tracking error.

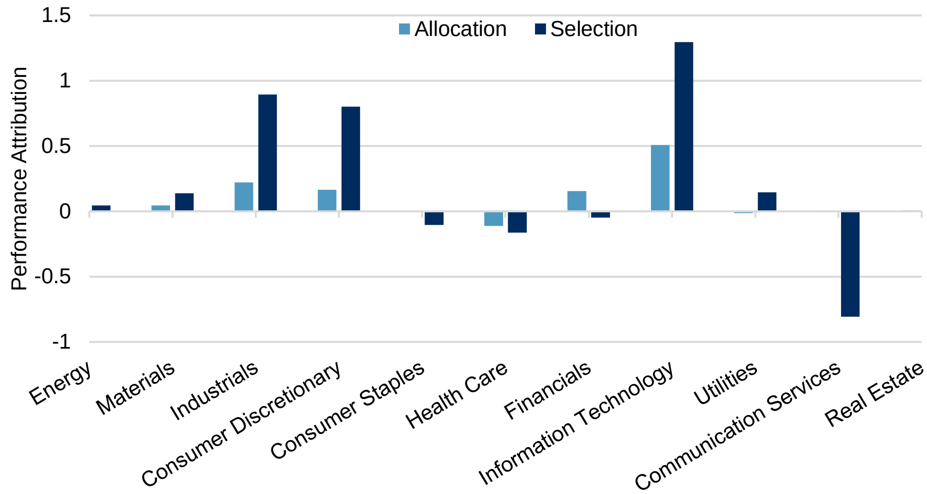
Performance Attribution: A Story of Selection

Throughout 2019 and 2020, the S&P 500 ESG Index provided some welcome outperformance.

Notwithstanding its objective to perform in line with the S&P 500, the S&P 500 ESG Index provided some welcome outperformance throughout 2019 and 2020. This stands out as a deviation from its historical norm, making performance attribution over a one-year time frame a particularly useful exercise. Interestingly, the outperformance was not necessarily due to over exposure to the IT sector or under exposure to the Energy sector, as many suppose. Instead, the stock selection effect, as determined by the index methodology, was the primary driver of outperformance over the past year. This is perhaps unsurprising, as the index construction lends itself to a broadly sector-neutral outcome, resulting in a minimal 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 best-ranked ESG performers by S&P DJI 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.

Stock selection effect was the primary driver of outperformance over the past year.

Exhibit 11: One-Year Performance Attribution of the S&P 500 ESG Index versus the S&P 500



Source: S&P Dow Jones Indices LLC, StatPro. Data from Sept. 30, 2019, to Sept. 30, 2020. Index performance based on daily total returns in USD. 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.

A rules-based approach, driven by sustainability principles and a materiality-weighted ESG scoring framework, increased the index allocation to names that drove the outperformance.

Some companies that were significant drivers of the performance of the S&P 500 over the past 12 months, such as Apple and Microsoft, for example, survived the rules-based exclusion and selection criteria and qualified for the S&P 500 ESG Index. Meanwhile, other names with less-than-stellar performance, such as Boeing, did not. Thus, we can infer that a rules-based approach, driven by sustainability principles and a materiality-weighted ESG scoring framework, has increased the index allocation to several successful names that drove the outperformance.

Factor Exposure of the S&P 500 ESG Index

The question sometimes arises whether the S&P 500 ESG Index exhibits any unintended factor exposures that might help to explain its recent outperformance.

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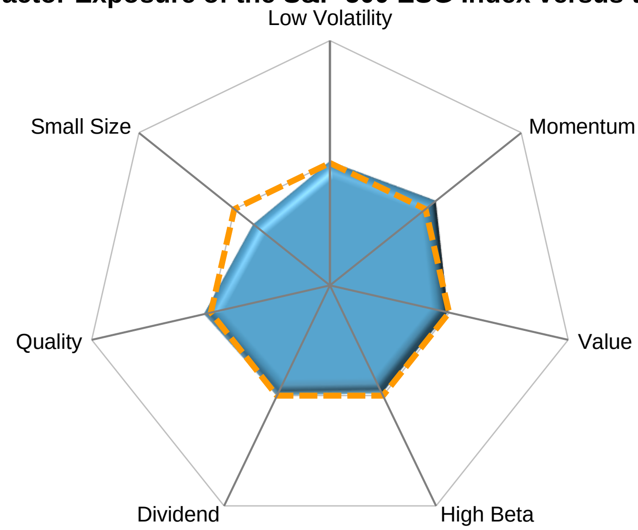
Exhibit 12: Factor Exposure of the S&P 500 ESG Index versus the S&P 500



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

One area where the underlying factor exposure of the index does diverge is in its exposure to large size.

Notwithstanding a similar picture overall, one area where the underlying factor exposure of the index does diverge is in its exposure to large size. This is unsurprising, due to the generally positive correlation between sustainability performance and firm size,[8] as visibility, access to resources, and operating scale are typically associated with large firms. However, the underlying factor exposure of the index confirms that the S&P 500 ESG Index is poised to do precisely what it was intended to do. That is, to improve the sustainability characteristics of the benchmark while maintaining broadly similar levels of risk and return to the S&P 500. Whether or not the recent outperformance may be attributed to size, sustainability, or perhaps something in between, requires further study.

[8] Drempetic, S., Klein, C., and Zwergel, B. "The Influence of Firm Size on the ESG Score: Corporate Sustainability Ratings Under Review," *Journal of Business Ethics* (2019).

REVIEWING THE RESULTS OF THE 2020 SPECIAL REBALANCE

The S&P 500 ESG Index rebalances on an annual basis.

The S&P 500 ESG Index rebalances on an annual basis, as noted earlier. Though "product involvement exclusions" related to tobacco and controversial weapons remain relatively constant, a significant source of turnover in the index is due to companies changing relative positions with respect to their S&P DJI ESG Scores.

Relative position matters because in two instances in the methodology, companies are sorted and selected—or screened out—according to their S&P DJI ESG Score.

A significant source of turnover in the index is due to companies changing relative positions with respect to their S&P DJI ESG Scores.

With the special September 2020 rebalance, 23 companies left the S&P 500 ESG Index and 12 companies were added. Exhibits 13 and 14 show the largest adds and drops in terms of market cap. Of these companies, 11 were dropped due to their involvement in thermal coal.

Exhibit 13: Largest Additions to the S&P 500 ESG Index*

COMPANY	WEIGHT (%)	REASON
IDEXX Laboratories Inc.	0.12	IDEXX Laboratories Inc. was the final company added in the Health Care Equipment & Services GICS industry group prior to the 75% market cap target being reached, ranked 21/32 in its industry group.
Consolidated Edison Inc.	0.09	Removal of thermal coal companies from the Utilities GICS industry group made room for previously lower-ranked companies in the same GICS industry group to be added.
Alexion Pharmaceuticals Inc.	0.09	Alexion Pharmaceuticals Inc. was the final company added in the Pharmaceuticals, Biotechnology & Life Sciences GICS industry group prior to the 75% market cap target being reached, ranked 19/22 in its industry group.
Edison Intl.	0.07	Removal of thermal coal companies from the Utilities GICS industry group made room for previously lower-ranked companies in the same GICS industry group to be added.
Varian Medical Systems Inc.	0.06	Varian Medical Systems Inc. was selected prior to the 75% market cap target being reached in the Health Care Equipment & Services GICS industry group, ranked 19/32 in its industry group.
AmerisourceBergen Corp.	0.05	AmerisourceBergen Corp. was selected prior to the 75% market cap target being reached in the Health Care Equipment & Services GICS industry group, ranked 19/32 in its industry group.
Nucor Corp.	0.05	Nucor Corp. was the final company added in the Materials GICS industry group prior to the 75% market cap target being reached, ranked 21/25 in its industry group.
Atmos Energy Corp.	0.04	Removal of thermal coal companies from the Utilities GICS industry group made room for previously lower-ranked companies in the same GICS industry group to be added.
Centerpoint Energy Inc.	0.04	Removal of thermal coal companies from the Utilities GICS industry group made room for previously lower-ranked companies in the same GICS industry group to be added.
Perrigo Company plc	0.02	Perrigo Company plc was selected prior to the 75% market cap target being reached in the Pharmaceuticals, Biotechnology & Life Sciences GICS industry group, ranked 17/22 in its industry group.

* Companies in the special rebalance in September were selected using the same S&P DJI ESG Scores as the standard annual rebalance effective April 30, 2020.
Source: S&P Dow Jones Indices LLC. Data as of Sept. 30, 2020. Table is provided for illustrative purposes.

Of these companies, 11 were dropped due to their involvement in thermal coal.

Exhibit 14: Largest Exclusions from the S&P 500 ESG Index*

COMPANY	WEIGHT (%)	REASON
Walt Disney Co.	0.80	Walt Disney Co. was ranked 8/18 in the Media & Entertainment GICS industry group. Given that the constituent selection was performed using the same S&P DJI ESG Scores as the standard annual rebalance in April, GICS industry group rankings remained static, but company float-adjusted market capitalizations were updated as of the last business day in August. Due to how these market caps fell with this rebalance, Walt Disney Co. was outside of the 75% market cap target for selection.
Dominion Energy Inc.	0.24	Removed for being involved in thermal coal.
Duke Energy Corp.	0.23	Removed for being involved in thermal coal.
Automatic Data Processing	0.22	Automatic Data Processing was ranked 15/33 in the Software & Services GICS industry group. Given that the constituent selection was performed using the same S&P DJI ESG Scores as the standard annual rebalance in April, GICS industry group rankings remained static, but company float-adjusted market capitalizations were updated as of the last business day in August. Due to how these market caps fell with this rebalance, Automatic Data Processing was outside of the 75% market cap target for selection.
American Electric Power	0.15	Removed for being involved in thermal coal.
Xcel Energy Inc.	0.13	Removed for being involved in thermal coal.
WEC Energy Group Inc.	0.11	Removed for being involved in thermal coal.
DTE Energy Co.	0.08	Removed for being involved in thermal coal.
PPL Corp.	0.08	Removed for being involved in thermal coal.
CMS Energy Corp.	0.06	Removed for being involved in thermal coal.

*Companies in the special rebalance in September were selected using the same S&P DJI ESG Scores as the standard annual rebalance effective April 30, 2020.
Source: S&P Dow Jones Indices LLC. Data as of Sept. 30, 2020. Table is provided for illustrative purposes.

In some instances, the index methodology ensured that certain S&P 500 companies continued to be excluded, after being excluded in previous years. Exhibit 15 lists the largest companies that were not included in the index following the special rebalance.

In some instances, the index methodology ensured that certain S&P 500 companies continued to be excluded, after being excluded in previous years.

Exhibit 15: 10 Largest Companies to Remain Out of the S&P 500 ESG Index

COMPANY	REASON
Berkshire Hathaway B	Formerly due to a low UNGC Score (which improved); however, currently excluded for having an S&P DJI ESG Score in the bottom 25% of its global GICS industry group.
Johnson & Johnson	Controversy (MSA case) in 2019.
PayPal Holdings Inc.	Eligible, but S&P DJI ESG Score not high enough to warrant selection.
Walt Disney Co.	Eligible, but S&P DJI ESG Score not high enough to warrant selection.
Netflix Inc.	Low UNGC score.
Walmart Inc.	Eligible, but S&P DJI ESG Score not high enough to warrant selection.
Broadcom Inc.	S&P DJI ESG Score in the bottom 25% of its global GICS industry group.
Philip Morris International	Involved in tobacco production or sales.
Honeywell Intl Inc.	Involved in controversial weapons.
Oracle Corp.	Eligible, but S&P DJI ESG Score not high enough to warrant selection.

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

Even as turnover is relatively high, certain companies have remained in the index year after year. Exhibit 16 highlights the 10 largest companies that have stayed in the S&P 500 ESG Index since its earliest calculation date, April 30, 2010. In all, 93 companies have been in the index since 2010.

Even as turnover is relatively high, certain companies have remained in the index year after year.

Exhibit 16: 10 Largest Companies Who Have Always Been in the S&P 500 ESG Index

COMPANY	FLOAT-ADJUSTED MARKET CAP (USD BILLION)
Apple Inc.	1,861.8
Procter & Gamble	346.0
Unitedhealth Group Inc	296.3
JP Morgan Chase & Co	293.4
Verizon Communications Inc	246.2
Adobe Inc.	235.2
Salesforce.com	228.7
Intel Corp	220.2
Merck & Co Inc	209.8
AT&T Inc	203.1

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

Individual Case Studies

Focusing on the impact of the methodology on some specific companies illustrates how different elements of the methodology work in practice.

Focusing on the impact of the methodology on some specific companies illustrates how different elements of the methodology work in practice.

EXCLUSION DRIVEN BY ESG SCORE: WALMART

In the 2019 assessment year, Walmart's ESG score fell by 25 points overall, from 52 to 27, which resulted in it being ranked last of the five companies in the Food & Staples Retailing GICS industry group. Though eligible for inclusion by passing all the exclusion criteria noted in this paper, Walmart was not selected through the process of targeting 75% of each GICS industry group's market capitalization.

Last year, Walmart made it into the index ranked fifth out of six companies in its industry group, but Costco improved its ESG score in the 2019 assessment year and CVS Health Corporation was reclassified into another industry, thus reducing the number of peers Walmart was ranked against.

INCLUSION DRIVEN BY ESG SCORE: FACEBOOK

After losing its standing in the S&P 500 ESG Index in 2019, Facebook was added back into the index in the April 2020 annual rebalance. This was the result of Facebook's higher ESG score (59 compared with 21 the previous year), which was largely driven by improvement in its Governance score, but also the result of other interesting index dynamics.

Walmart made it into the index, but Costco improved its ESG score and CVS Health Corporation was reclassified into another industry, thus reducing the number of peers Walmart was ranked against.

Facebook was added back into the index in the 2020 rebalance as a result of its higher ESG score.

Twitter was excluded from the eligible universe of companies to be selected due to its relatively low UNGC score.

Facebook benefited from two factors. First, Facebook changed classifications from IT Services & Internet Software & Services to Interactive Media Services & Home Entertainment. In the former industry group, Facebook was ranked last of 25 companies by ESG score in the 2018 assessment year; in 2019, Facebook was ranked 8 of 22 in its new industry group. Second, Facebook benefited from Twitter becoming ineligible due to its low UNGC score, as detailed in the next section. Because Twitter lost its eligibility, Facebook became the final selection within its industry group to attain the desired 75% market cap threshold.

EXCLUSION DRIVEN BY LOW UNGC SCORE: TWITTER

Twitter was excluded from the eligible universe of companies to be selected due to its relatively low UNGC score, as determined by Arabesque S-Ray GmbH. Between 2019 and 2020, Twitter saw a significant drop in its Arabesque UNGC score mostly due to issues related to labor rights and specifically regarding whether Twitter had resisted its workers' right to organize.

EXCLUSION DRIVEN BY MEDIA & STAKEHOLDER ANALYSIS: JOHNSON & JOHNSON

Johnson & Johnson remained excluded from the index after a SAM Media & Stakeholder Analysis (MSA) resulted in this company's removal in October 2019. This MSA case was triggered by several controversies, including:

- The announcement of the Department of Justice's criminal investigation into whether company officials knew about the carcinogens in their products;
- The announcement of a USD 120 million settlement over alleged deceptive promotion of hip implants;
- Lawsuits filed by patients who incurred injuries after taking blood thinner Xarelto; and
- The USD 572 million fine in Oklahoma to resolve allegations of fraudulently downplaying the hazards and overemphasizing the benefits of opioids.

An Ecosystem Is Evolving

Since the index was launched in January 2019, the number of investment products tied to the index has grown, with several exchange-traded funds (ETFs) spanning the U.S., Europe, Canada, and the U.K.—with assets under management totaling approximately USD 1.3 billion to date.[9] In addition,

[9] Data as of Sept. 30, 2020.

Since the index was launched in January 2019, the number of investment products tied to the index has grown.

futures listed on the CME have traded over USD 10 billion in notional value since they launched in November 2019, providing additional liquidity to an evolving ecosystem of market participants who use the S&P 500 ESG Index. Interestingly, investments in these products have come from various client segments and geographies as opposed to a select few, ESG-oriented institutional investors, suggesting that the S&P 500 ESG Index is becoming increasingly accepted as a starting point for ESG investments among market participants around the world.

THE 2020 SPECIAL REBALANCE: HOW WE GOT HERE

When the S&P 500 ESG Index was launched in January 2019 as an accessible starting point for ESG investors around the world, it did so by excluding the types of business activities deemed unacceptable by the broadest possible majority of sustainability-minded investors and selecting constituents according to their relative S&P DJI ESG Score performance within indices and industry groups.

Investments in these products have come from various client segments and geographies as opposed to a select few, ESG-oriented institutional investors.

Just over 19 months later, the landscape has evolved to a point at which thermal coal companies may now be counted among this lowest common denominator of "unsustainable" investments. Thus, after an industry-wide, public consultation that confirmed this shift in investor perception, the S&P ESG Index Series Methodology was updated to exclude thermal coal in an extraordinary rebalance that took effect on Sept. 21, 2020.[10]

CONCLUSION

The S&P 500 ESG Index is beginning to cement its position as a common starting point for ESG investors around the world focused on U.S. equities.

The launch of the S&P 500 ESG Index marked a watershed moment in the landscape of sustainable investments. By offering a broad-based, sustainable alternative to the S&P 500, the index is beginning to cement its position as a common starting point for ESG investors around the world focused on U.S. equities. While exhibiting desirable sustainability characteristics—such as stronger commitments to reduce greenhouse gas emissions, enhanced female participation in management positions, and employee incentives for a more effective risk culture—the index has 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—and not just at the periphery. As a sustainable substitute for the iconic S&P 500, therefore, the S&P 500 ESG Index is helping to elevate ESG investing from the margins to the mainstream.

[10] Read more about the 2020 special rebalance here.

APPENDIX: FROM LARGE CAP TO ALL CAP: INTRODUCING THE S&P MIDCAP 400® ESG INDEX AND THE S&P SMALLCAP 600® ESG INDEX

On Jan. 18, 2021, S&P Dow Jones Indices expanded the S&P ESG Index Series to include ESG versions of the small- and mid-cap U.S. equity benchmarks, the S&P SmallCap 600 and the S&P MidCap 400.

Due to generally poor levels of ESG disclosure among small- and medium-sized companies, several methodological adjustments were applied to ensure the indices may continue to satisfy the objective of the S&P ESG Index Series. That is, to improve sustainability characteristics while providing similar levels of risk and return relative to the benchmark.[11] These adjustments include the following.

Amendments to the S&P ESG Index Series Methodology

In the standard S&P ESG Index Series Methodology (see Step 2 of Exhibit 3), companies that rank among the bottom 25% of the S&P DJI ESG Score among an index's GICS industry group globally are excluded from the index.[12] For the S&P MidCap 400 ESG Index and S&P SmallCap 600 ESG Index, however, companies are only deemed ineligible based on their S&P DJI ESG Score if any of the following criteria are satisfied.

1. The S&P DJI ESG Score falls within the worst 25% of scores from the company's GICS industry group in the underlying index.
2. The S&P DJI ESG Score falls within the worst 10% of scores in the company's underlying index.
3. If, after Steps 1 and 2, less than 75% of the weight of the underlying index remain eligible, the above steps are relaxed as follows.
    a. The S&P DJI ESG Score falls within the worst 20% of scores from the company's GICS industry group in the underlying index. If after this relaxation the 75% target is still not met, then Step 1 is further relaxed as follows.
        i. The S&P DJI ESG Score falls within the worst 15% of scores from the company's GICS industry group in the underlying index.

At this point, if the target is still not met, no further relaxation is performed, even if the 75% target is not satisfied.

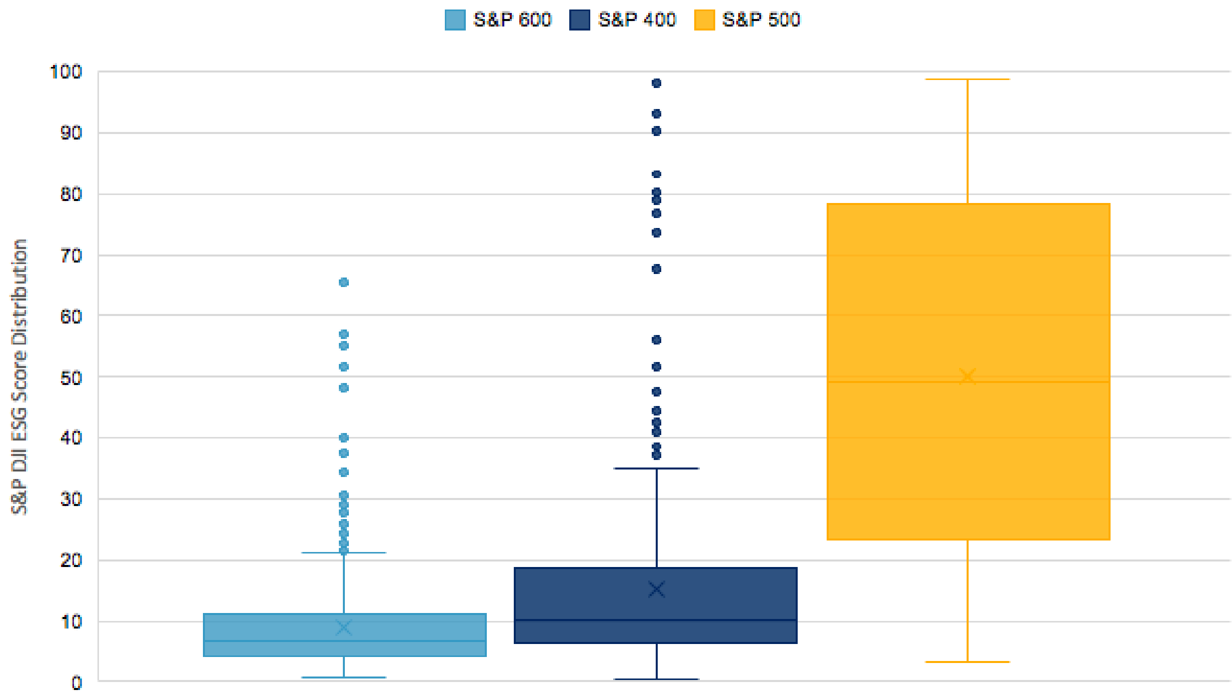
Other exclusionary screens pertaining to controversial weapons, thermal coal, tobacco, UNGC violators, and company controversies are applied as per the standard S&P ESG Index Series Methodology. In addition, the process for selecting constituents from the eligible universe—by targeting the top 75% of market capitalization within index industry groups where companies are ranked by S&P DJI ESG Score—remains the same.

[11] As stated on page 4, the S&P 500 ESG Index methodology was developed with two objectives: (1) To provide a similar risk/return profile to the S&P 500; and (2) To avoid companies that are not managing their businesses in line with ESG principles, according to the S&P DJI ESG Scores and other relevant ESG data, while including companies that are doing so. For more information on the S&P ESG Index Series Methodology, please see https://www.spglobal.com/spdji/en/documents/methodologies/methodology-sp-esg-index-series.pdf.

[12] Where the global universe for this categorization is defined as the combined constituents of the S&P Global LargeMidCap and S&P Global 1200 as of the rebalancing reference date.

The reasons for these adjustments are twofold. First, there is relatively less disclosure among medium- and small-sized firms than larger companies with respect to ESG;[13] second, larger companies tend to perform better on ESG issues,[14] the reasons for which are discussed on page 12. As such, we find a positive correlation between S&P DJI ESG Scores and company size (see Exhibit A1). This means that if the methodology were to apply the standard S&P DJI ESG Score exclusion criteria, it would result in an eligible universe that is too narrow to maintain a broad and diversified index and, therefore, would be unable to satisfy the objective of the S&P ESG Index Series.

Exhibit A1: S&P 600, S&P 400 and S&P 500 ESG Score Distributions



Source: S&P Dow Jones Indices LLC. Data as of Aug. 31, 2020. Chart is provided for illustrative purposes.

Index Composition

With these adjustments, 121 constituents of the S&P 400™ and 187 of the S&P 600™ were either excluded from or not selected for inclusion in their ESG variants. As of the last rebalance, this amounted to removing 30.79% and 28.41% of the market capitalization of the S&P MidCap 400 ESG Index and S&P SmallCap 600 ESG Index, respectively. Exhibit A4 provides the reasons for these exclusions while Exhibit A5 reviews the composition of the indices.

[13] According to Sardon, M., "The Potentially High Cost of Not Disclosing ESG Data," *Wall Street Journal* (2019), "Midsize and small companies generally lag behind their larger peers in terms of disclosure because they are less likely to have resources such as ESG-dedicated team or a sustainability department."

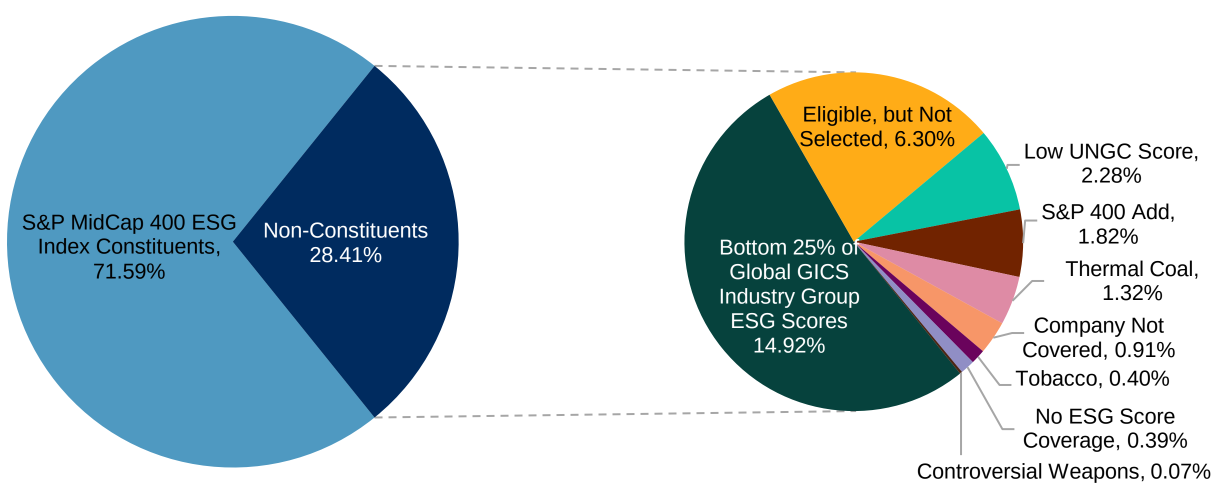
[14] A positive correlation between sustainability performance and firm size is generally observed due to the greater visibility, access to resources, and operating scale associated with large firms. For example, see Drempetic, S., Klein, C., and Zwergel, B. "The Influence of Firm Size on the ESG Score: Corporate Sustainability Ratings Under Review." *Journal of Business Ethics* (2019) for more information.

Exhibit A4: Reasons for Exclusion from the S&P MidCap 400 ESG Index and S&P SmallCap 600 ESG Index				
REASON FOR EXCLUSION	S&P MIDCAP 400 ESG INDEX		S&P SMALLCAP 600 ESG INDEX	
	NUMBER OF EXCLUSIONS	WEIGHT IN BENCHMARK (%)	NUMBER OF EXCLUSIONS	WEIGHT IN BENCHMARK (%)
Eligible but Not Selected (Not Part of the Top 75% of Industry Group Market Cap)	30	6.3	28	4.16
S&P DJI ESG Score in Bottom 25% of Local GICS Industry Group or Bottom 10% Overall	60	14.92	95	17.22
UNGC Score Too Low	11	2.28	29	4.33
Added to the Underlying Index after Rebalance Reference Date	8	1.82	8	1.7
Involved in Thermal Coal	6	1.32	1	0.02
Involved in Tobacco Production or Sales	1	0.4	5	0.71
No ESG Score	2	0.39	8	1.17
Involved in Controversial Weapons	1	0.07	1	0.44
Company Not Covered by ESG Data	2	0.91	12	1.04

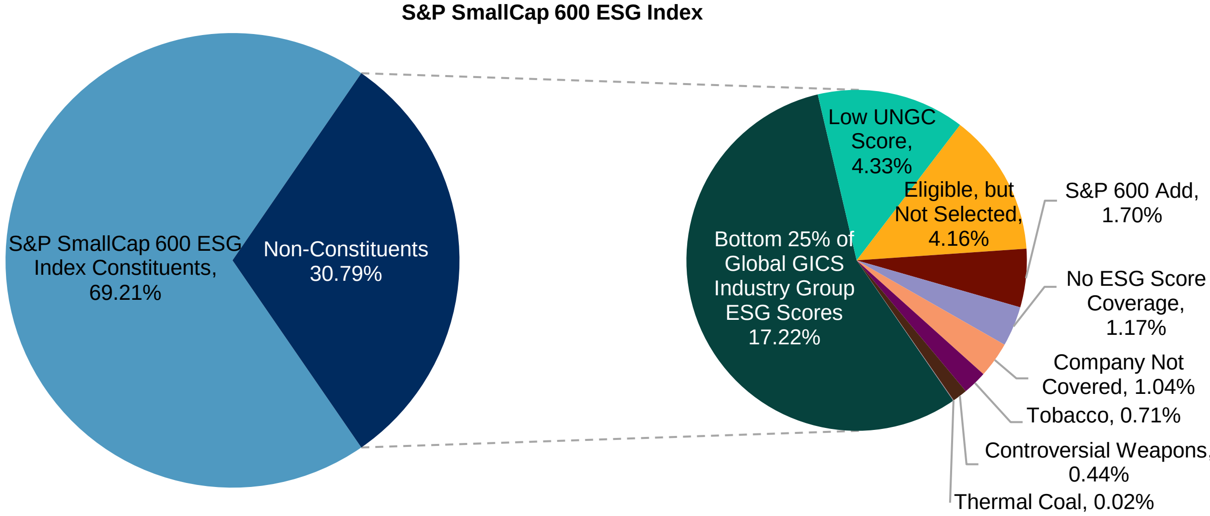
Source: S&P Dow Jones Indices LLC. Data as of Sept. 30, 2020. Table is provided for illustrative purposes.

Exhibit A5: Underlying Index Weights by S&P MidCap 400 ESG Index and S&P SmallCap 600 ESG Index Compositions

S&P MidCap 400 ESG Index



S&P SmallCap 600 ESG Index



Source: S&P Dow Jones Indices LLC. Data of Sept. 30, 2020. Charts are provided for illustrative purposes.

Results and Performance

ABSOLUTE S&P DJI ESG SCORE IMPROVEMENT

At the aggregate score level, the S&P MidCap 400 ESG Index and S&P SmallCap 600 ESG Index achieved absolute S&P DJI ESG Score improvements of 3.60% and 2.37%, respectively, relative to their benchmarks.[15] These modest, albeit meaningful, improvements are representative of the challenges associated with S&P DJI ESG Score transparency and performance among smaller companies.

However, these indices also represent a new sustainable frontier in a space left largely untouched by current sustainable indexing. For the first time, companies of this size are now being rewarded or penalized on the basis of their sustainability credentials through a transparent and rules-based selection process, which should serve to raise the bar on sustainable business practices as they seek to improve their standing in the indices over time. This, coupled with S&P DJI's unparalleled levels of direct company engagement via the CSA that has historically served as a guide for companies to progress along their sustainability journey, means these indices are uniquely positioned to reshape corporate sustainability behaviors below a certain cap size.

Ultimately, whether or not such improvements will amount to a widening "sustainability premium" (in terms of higher levels of absolute S&P DJI ESG Score improvements as certain companies improve more than others) or, rather, improve sustainability standards across *all* companies within the starting benchmark universe, remains to be seen. In either case, the potential enhancements in sustainability efforts would be welcome.

REALIZED ESG POTENTIAL

As with the S&P 500 ESG Index, another metric we can assess is the realized ESG potential of both indices. By this measure, the S&P MidCap 400 ESG Index and S&P SmallCap 600 ESG Index realized more than 4.18% and 4.06% of their ESG improvement potential of their respective starting universes.[16] In the case of the S&P 400 and S&P 600, a predominately negative skew (implied by a positive correlation between the S&P DJI ESG Score and firm size) that includes a handful of highly ranked outliers (see Exhibit A1), accounts for the relatively low levels of realized S&P DJI ESG Score potential. In other words, the generally low levels of S&P DJI ESG Score performance among small- and medium-sized companies makes it difficult to substantially enhance the sustainability profile while maintaining suitable diversification. The sensitivity of this particular metric to outliers explains the comparatively low levels of realized ESG potential. On the other hand, this also suggests that there is meaningful room for improvement in the sustainability practices of small- and medium-sized firms. Thus, the introduction of the S&P MidCap 400 ESG Index and S&P SmallCap 600 ESG Index

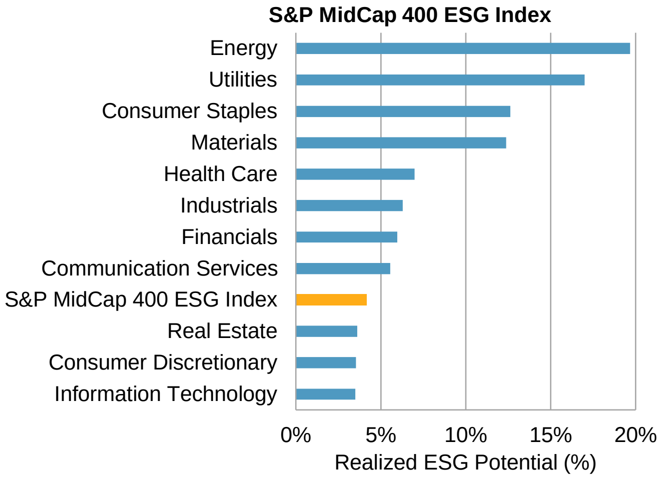
[15] As of Sept. 30, 2020, the composite S&P DJI ESG Score of the S&P MidCap 400 ESG Index was 15.48 and the S&P SmallCap 600 ESG Index was 9.64, compared with the S&P 400 score of 11.88 and S&P 600 score of 7.27. S&P DJI ESG Scores are designed to be read as percentiles. A company score of 70 means that company has a higher score than 70% of its peers in that particular industry. Thus, a score of 11.88 means that the S&P 400 had a collectively higher score than 11.88% and the S&P 600 had a collectively higher score of 9.64% of the companies in the broader universe.

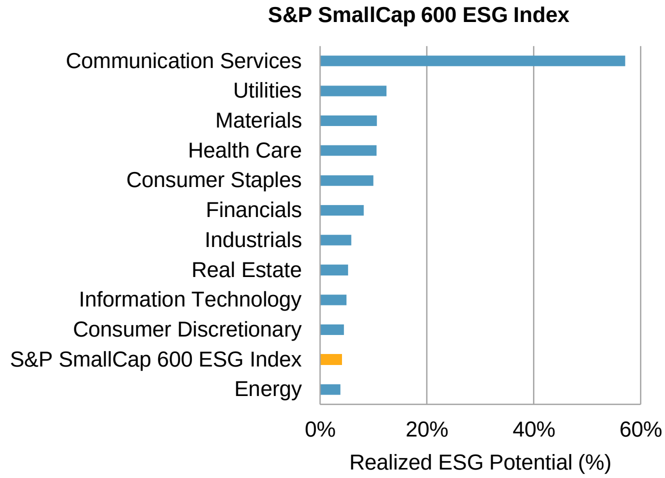
[16] As of Sept. 30, 2020, a score increase of 3.60 associated with the S&P MidCap 400 ESG Index represents 4.18% ((3.35)/(98.11-85.88)) of the possible ESG improvement that the index could achieve (98.11 is the highest score in the S&P 400). Similarly, a score increase of 2.37 for the S&P SmallCap 600 ESG Index represents 4.06% ((2.37)/(65.58-7.27) of the possible ESG improvement that the index could achieve (65.58 is the highest score in the S&P 600). Realized ESG potential is calculated as the percentage difference between the aggregate S&P DJI ESG Scores of the S&P MidCap 400 ESG Index and the S&P 400, relative to the strategy's maximum potential ESG improvement based on investing only in the single highest-ranked ESG scoring company in the benchmark.

successfully helps to raise sustainability standards and might underpin the strongest value proposition for the markets overall.

As with their large-cap counterpart, certain sectors fared better in terms of their realized ESG potential, and again in some cases, even more so than the index overall (see Exhibit A7).

Exhibit A6: Realized ESG Potential of the S&P MidCap 400 ESG Index and S&P SmallCap 600 ESG Index versus the Underlying Indices





Source: S&P Dow Jones Indices LLC. Data as of Sept. 30, 2020. Realized ESG potential calculated as the percentage difference between the performance of the S&P MidCap 400 ESG Index and S&P 400 constituents and between the S&P SmallCap 600 ESG Index and S&P 600 across these metrics on a weighted average basis. Charts are provided for illustrative purposes.

REAL-WORLD BENEFITS

The S&P MidCap 400 ESG Index and S&P SmallCap 600 ESG Index also achieve numerous real-world ESG impacts, which provide a deeper view on the sustainability benefits. A small sample of these sustainability enhancements are highlighted in Exhibit A7. It is worth noting that the majority of these relate to the *transparency* of ESG issues, rather than actual *performance*. Again, this represents the generally low levels of ESG disclosure and sustainable business practices among small- and medium-sized firms. However, transparency and reporting is often the first step as companies embark on their sustainability journeys, as the dictum “we first have to measure, before we can manage” suggests.

Exhibit A7: Benefits of the S&P MidCap 400 ESG Index and S&P SmallCap 600 ESG Index versus the Underlying Indices

S&P MidCap 400 ESG Index

Environmental

6% Exposure to companies that publicly report on environmental quantitative KPIs including targets linked to these indicators

5% Exposure to companies that monitor and report their total freshwater consumption, energy consumption, and direct GHG emissions

5% Exposure to companies that have a publicly available environmental management policy including production operations and business facilities

Social

7% Exposure to companies that publicly report on their ratio of employees represented by an independent trade union or covered by collective bargaining agreements

7% Exposure to companies that have a group-wide strategy that provides guidance to their corporate citizenship activities

5% Exposure to companies that report on their employee development programs and monitor their business benefits

Governance

6% Exposure to companies that have predefined financial returns or relative financial metrics relevant for the CEO's variable compensation

5% Exposure to companies that perform sensitivity analysis and stress testing on changes in financial risks

5% Exposure to companies that have publicly available group-wide codes of conduct, as well as an anti-corruption and bribery policy

S&P SmallCap 600 ESG Index

Environmental

4% Exposure to companies that have a publicly available environmental management policy that includes production operations and business facilities

3% Exposure to companies that publicly report on at least three environmental KPIs with at least three years of history

2% Exposure to companies that monitor and publicly report their energy consumption and direct GHG emissions

Social

6% Exposure to companies that have a group-wide strategy defining priorities and providing guidance to their corporate citizenship activities

4% Exposure to companies that publicly report on their ratio of employees represented by an independent trade union or covered by collective bargaining agreements

3% Exposure to companies that monitor and report on diversity-related metrics including female representation in total workforce

Governance

6% Exposure to companies that publicly report on management ownership of company shares

6% Exposure to companies that elect board members individually and disclose the number of other mandates of non-executive/independent board directors

5% Exposure to companies that have a supplier code of conduct covering child labor, remuneration, occupational health and safety standards, working conditions, business ethics, and others

Source: S&P Dow Jones Indices LLC. Data as of May 1, 2020. These are just a few examples of the numerous ways in which the S&P MidCap 400 ESG Index and S&P SmallCap ESG Index offer enhanced ESG representation. Increased index exposure to each ESG theme in the metrics are calculated using the question-level data in SAM's CSA (2019 methodology year). These metrics are calculated as the percentage difference between the performance of the S&P MidCap 400 ESG Index and S&P 400 constituents and between the performance of the S&P SmallCap 600 ESG Index and S&P 600 across these metrics on a weighted average basis. Charts are provided for illustrative purposes

RISK/RETURN PROFILES

As with the S&P 500 ESG Index, the S&P MidCap 400 ESG Index and S&P SmallCap 600 ESG Index seek to improve the sustainability profile of the respective index, while maintaining broad and diversified exposure to provide benchmark-like returns. The risk/return metrics over a one-, three-, and five-year time horizon demonstrate that both ESG indices delivered on their objective—with realized tracking errors under 2%, almost identical volatility, and some welcome outperformance—relative to their benchmarks, the S&P 400 and S&P 600 (see Exhibit A8).[17]

Exhibit A8: Performance Characteristics of the S&P MidCap 400 ESG Index and S&P SmallCap 600 ESG Index versus the Underlying Indices

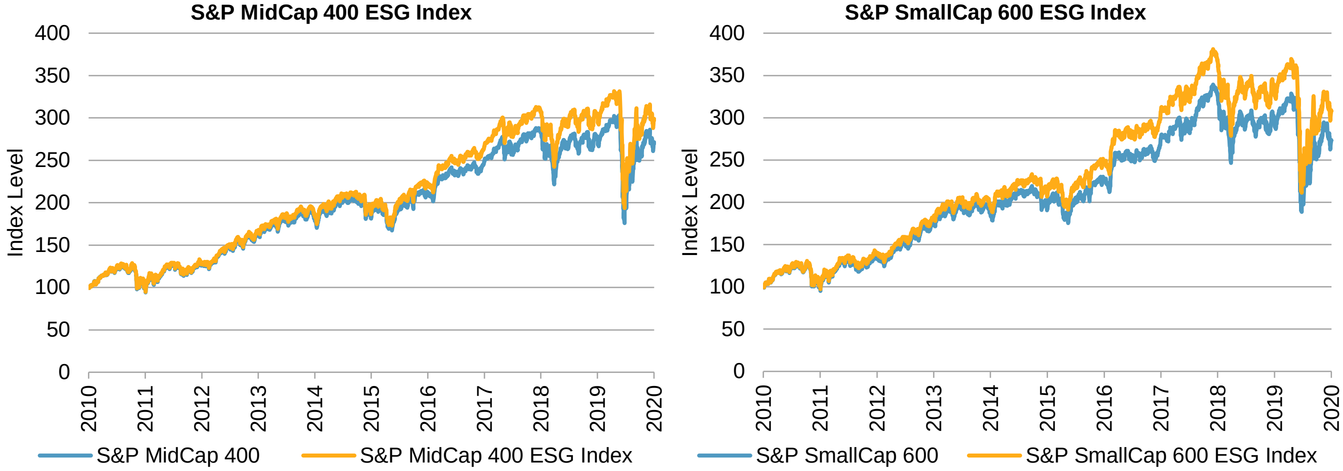
CATEGORY	S&P MIDCAP 400	S&P MIDCAP 400 ESG INDEX	S&P SMALLCAP 600	S&P SMALLCAP 600 ESG INDEX
Number of Constituents	400	279	601	414
Float-Adjusted Market Cap (USD Billions)	1,650	1,181	668.9	462.9
ANNUALIZED TOTAL RETURNS (%)				
10-Year	10.49	11.58	10.57	11.9
5-Year	8.11	9.63	7.2	7.99
3-Year	2.9	3.92	-0.33	-0.03
1-Year	-2.16	-1.48	-8.29	-8.12
EXCESS RETURNS (%)				
10-Year	-	1.09	-	1.33
5-Year	-	1.52	-	0.79
3-Year	-	1.02	-	0.31
1-Year	-	0.68	-	0.17
ANNUALIZED RISK (%)				
10-Year	16.27	16.43	17.78	17.67
5-Year	18.49	18.53	20.33	20.49
3-Year	22.07	22.02	23.32	23.66
REALIZED TRACKING ERROR (%)				
10-Year	-	1.02	-	1.33
5-Year	-	1.11	-	1.36
3-Year	-	1.25	-	1.48
1-Year	-	1.62	-	1.76

Source: S&P Dow Jones Indices LLC. Data as of Sept. 30, 2020. Index performance based on total return in USD. 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.

Despite excluding over 28% and 30% of market capitalization, respectively, the S&P MidCap 400 ESG Index and S&P SmallCap 600 ESG Index achieved a similar return profile to their benchmark indices across the 10-year and 1-year time frames (see Exhibits A9 and A10), alongside the sustainability enhancements discussed above.

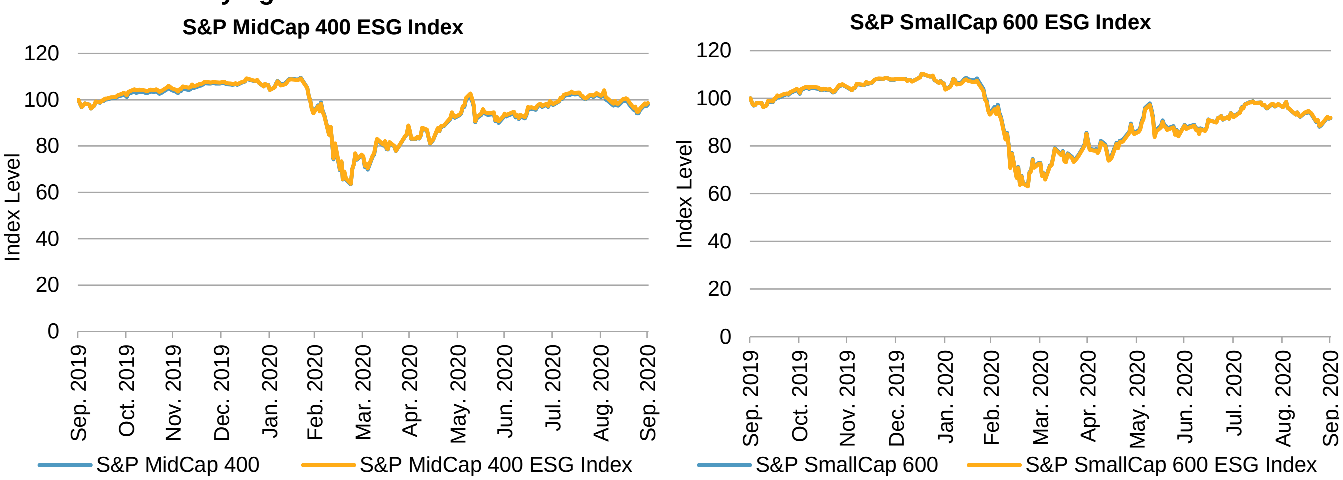
[17] Prior to January 2019, Sustainalytics did not collect data on the corporate ownership indicator, so index history before that date does not reflect the impact of the indicator. The indicator, along with the other categories of involvement indicators, is applied at each rebalancing from January 2019 onwards.

Exhibit A9: 10-Year Historical Returns of the S&P MidCap 400 ESG Index and S&P SmallCap 600 ESG Indices versus the Underlying Indices



Source: S&P Dow Jones Indices LLC. Data from Sept. 30, 2010, to Sept. 30, 2020. Index performance based on daily total return in USD. Past performance is no guarantee of future results. Charts are provided for illustrative purposes and reflect 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 A10: One-Year Performance of the S&P MidCap 400 ESG Index and S&P SmallCap 600 ESG Index versus the Underlying Indices



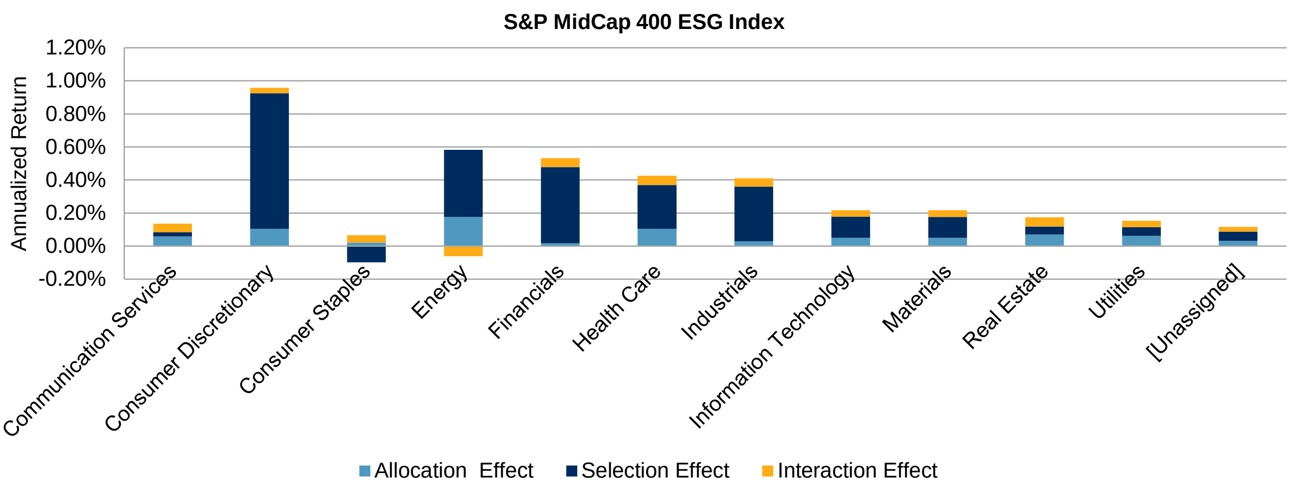
Source: S&P Dow Jones Indices LLC. Data from Sept. 30, 2019, to Sept. 30, 2020. Index performance based on daily total return in USD. Past performance is no guarantee of future results. Charts are provided for illustrative purposes and reflect hypothetical historical performance. Please see the Performance Disclosure at the end of this document for information regarding the inherent limitations associated with back-tested performance.

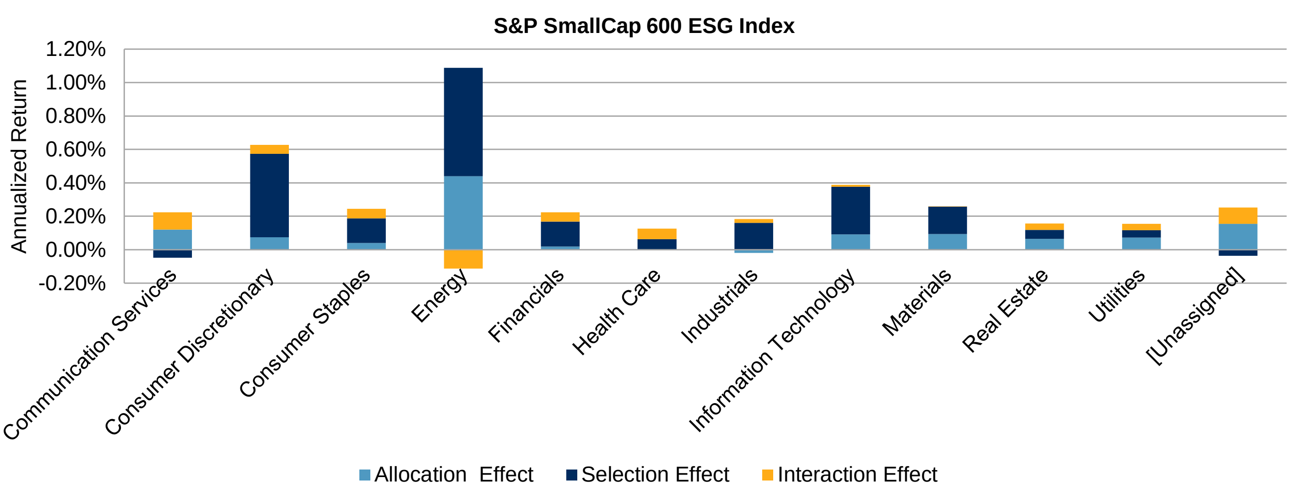
Performance Attribution

The relatively recent outperformance of the S&P 500 ESG Index merited a deeper look into the performance attribution over the past year (see Exhibit A11). However, both its small- and mid-cap ESG counterparts experienced similar outperformance over a much longer period of time. Performance attribution is instead provided over a 10-year time frame for the S&P MidCap 400 ESG Index and S&P Small Cap ESG Index (see Exhibit A11).

As we can see, the selection effect accounted for the majority of the outperformance associated with the small- and mid-cap ESG indices, in large part due to the broadly sector-neutral approach of the S&P ESG Index Series methodology. As with the S&P 500 ESG index, we can conclude that a rules-based selection process driven by ESG principles within the small- and mid-cap ESG variants resulted in an uptick in performance.

Exhibit A11: Historical Performance Attribution of the S&P MidCap 400 ESG Index and the S&P SmallCap ESG Index versus the Underlying Indices





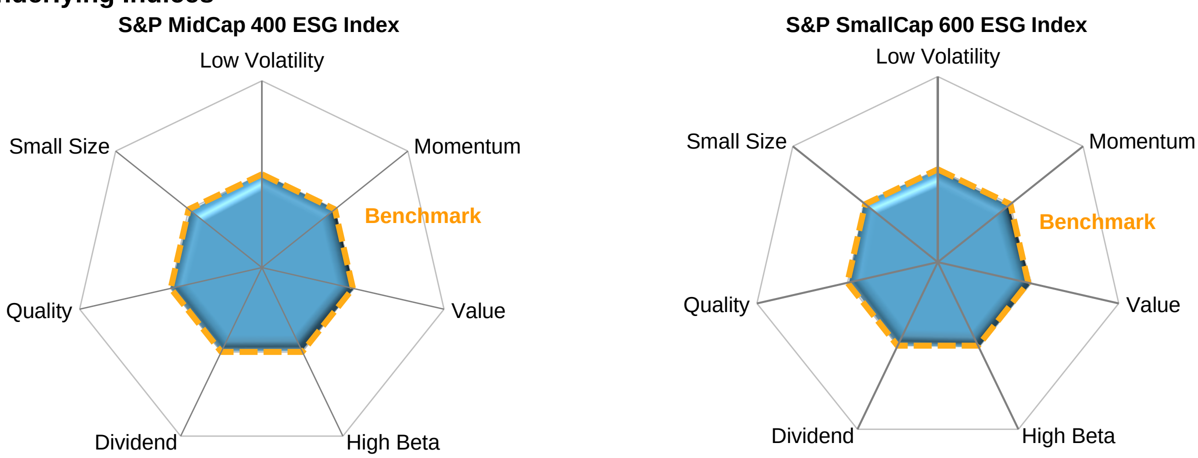
Source: S&P Dow Jones Indices LLC, FactSet. Data from May 3, 2019, to Sept. 30, 2020. Index performance based on daily total return in USD. Past performance is no guarantee of future results. Charts are provided for illustrative purposes and reflect hypothetical historical performance. Please see the Performance Disclosure at the end of this document for more information regarding the inherent limitations associated with back-tested performance.

Factor Exposure

Interestingly, though the S&P 500 ESG Index has exhibited a slight large-cap bias (see Exhibit A12), the S&P 400 MidCap ESG Index and S&P SmallCap 600 ESG Index had almost identical factor exposures to their respective benchmark indices (see Exhibit A12). As such, the historical outperformance cannot be explained away by any unintended factor exposure. This seems to suggest that ESG might just be a factor below a certain cap size, although further research is needed to confirm.

Moreover, as the sustainability credentials of such companies improve, it is also entirely possible that the largest among the small- and medium-sized firms comprising the S&P 400 and S&P 600 universe are better positioned to do so, such that we might possibly observe a similar increase in the underlying size bias associated with these indices over time. Nevertheless the similarities in the overall factor exposure of both indices at present at least confirms that—just as their large-cap counterpart—the S&P MidCap 400 ESG Index and S&P SmallCap 600 ESG Index have been well positioned to do precisely what they are intended to do.

Exhibit A12: Factor Exposure of the S&P MidCap 400 ESG Index and S&P SmallCap 600 ESG Index versus the Underlying Indices



Source: S&P Dow Jones Indices LLC. Data as of Sept. 30, 2020. Charts are provided for illustrative purposes.

Rebalance and Exclusions

As with all the indices within the S&P ESG Index Series, the small- and mid-cap ESG indices rebalance annually in April. At the time of the most recent rebalance, the S&P Midcap 400 ESG Index excluded 121 companies, and the S&P SmallCap ESG 600 Index excluded 187 companies.[18] The largest exclusions by market capitalization and the reason for their exclusion can be found in Exhibit A14.

[18] In September 2020, S&P DJI conducted an extraordinary rebalance on the S&P ESG Index Series in response to a public consultation that resulted in the exclusion of thermal coal companies. Many of the exhibits in the addendum reference the September extraordinary rebalance date. For more information on the public consultation and the extraordinary rebalance, please visit www.spglobal/spdji.

Exhibit A14: Largest Exclusions from the S&P Midcap 400 ESG Index and S&P SmallCap 600 ESG Index

S&P MIDCAP 400 ESG INDEX COMPANY	WEIGHT (%)	REASON
SolarEdge Technologies Inc	0.72	Company not covered
RPM International Inc	0.65	S&P DJI ESG Score in the bottom 25% of local GICS industry group or bottom 10% overall
Brown & Brown Inc	0.64	S&P DJI ESG Score in the bottom 25% of local GICS industry group or bottom 10% overall
Sunrun Inc	0.59	Eligible but not selected
Medical Properties Trust	0.57	S&P DJI ESG Score in the bottom 25% of local GICS industry group or bottom 10% overall
Essential Utilities Inc	0.54	S&P DJI ESG Score in the bottom 25% of local GICS industry group or bottom 10% overall
Caesars Entertainment, Inc	0.52	Eligible but not selected
Trex Co	0.50	S&P DJI ESG Score in the bottom 25% of local GICS industry group or bottom 10% overall
Jazz Pharmaceuticals plc	0.48	Addition to the S&P 400 following the special September rebalance date
Royal Gold Inc	0.48	S&P DJI ESG Score in the bottom 25% of local GICS industry group or bottom 10% overall
S&P SMALLCAP 600 ESG INDEX COMPANY	**WEIGHT (%)**	**REASON**
Stamps.com Inc	0.63	S&P DJI ESG Score in the bottom 25% of local GICS industry group or bottom 10% overall
Simpson Manufacturing	0.63	Eligible but not selected
Neogen Corp	0.62	S&P DJI ESG Score in the bottom 25% of local GICS industry group or bottom 10% overall
NeoGenomics	0.61	S&P DJI ESG Score in the bottom 25% of local GICS industry group or bottom 10% overall
Kinsale Capital Group	0.60	S&P DJI ESG Score in the bottom 25% of local GICS industry group or bottom 10% overall
Exponent	0.56	S&P DJI ESG Score in the bottom 25% of local GICS industry group or bottom 10% overall
UFP Industries	0.52	S&P DJI ESG Score in the bottom 25% of local GICS industry group or bottom 10% overall
YETI Holdings Inc	0.51	UNGC score in the bottom 5% of all companies globally
LivePerson	0.48	Eligible but not selected
Iridium Communications	0.48	S&P DJI ESG Score in the bottom 25% of local GICS industry group or bottom 10% overall

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

Conclusion

The expansion of the S&P DJI ESG Index Series into the mid- and small-cap universes represents a watershed moment in the landscape for sustainable investing. As the first of their kind, the S&P MidCap 400 ESG Index and S&P SmallCap 600 ESG Index enable market participants to enhance the sustainability characteristics of the core of their portfolios, and across *all* cap sizes, while maintaining similar levels of risk/return to their respective benchmarks. Most importantly, however, they are uniquely positioned to drive greater reporting and sustainability standards among small- and medium-sized firms, as companies compete to join the ranks of the ESG indices for the first time ever.

PERFORMANCE DISCLOSURE/BACK-TESTED DATA

The S&P 500 ESG Index was launched January 28, 2019. The S&P SmallCap 600 ESG Index and S&P MidCap 400 ESG Index were launched January 11, 2021. 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.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.

Index returns shown do not represent the results of actual trading of investable assets/securities. S&P Dow Jones Indices maintains the index and calculates the index levels and performance shown or discussed but does not manage actual assets. Index returns do not reflect payment of any sales charges or fees an investor may pay to purchase the securities underlying the Index or investment funds that are intended to track the performance of the Index. The imposition of these fees and charges would cause actual and back-tested performance of the securities/fund to be lower than the Index performance shown. As a simple example, if an index returned 10% on a US $100,000 investment for a 12-month period (or US $10,000) and an actual asset-based fee of 1.5% was imposed at the end of the period on the investment plus accrued interest (or US $1,650), the net return would be 8.35% (or US $8,350) for the year. Over a three-year period, an annual 1.5% fee taken at year end with an assumed 10% return per year would result in a cumulative gross return of 33.10%, a total fee of US $5,375, and a cumulative net return of 27.2% (or US $27,200).

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