MSCI

RESEARCH INSIGHT

MSCI ESG Ratings in Global Equity Markets: A Long-Term Performance Review

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Executive summary

In this paper, we review the financial performance of MSCI ESG Ratings in global (MSCI ACWI Index) and developed markets (MSCI World Index) over the course of their history of 11 and 17 years, respectively.

A key difference between MSCI ESG Ratings and traditional market-risk factors such as value or momentum is the fact that MSCI ESG Ratings assess corporate risk rather than market risk. Our study was therefore based on both a fundamental performance assessment (how differences in ESG ratings were associated with differences in earnings and profitability) and a stock-price performance assessment. This is important to understand to what extent (if observed) better corporate-earnings fundamentals were transmitted into better market performance, which we called the “transmission channel.”

Using a standard quintile analysis on MSCI ESG scores (controlled for sectors, regions and company size), we found that companies with higher MSCI ESG Ratings outperformed their lower-rated counterparts across both the MSCI ACWI Index and the MSCI World Index over the study periods of 11 and 17 years, respectively.

It is interesting to highlight that the total MSCI ESG Rating showed a stronger and less volatile outperformance than the individual, E, S and G pillar scores, which means the aggregation of environmental, social and governance risk issues into a total ESG score has added financial value.

We saw similar results when looking at the performance of MSCI ESG Ratings quintiles in the four subregions of the MSCI ACWI Index: North America, Europe, Pacific and emerging markets (EM).

We found that this outperformance of companies with higher MSCI ESG Ratings existed even when controlling for equity-style factors using the MSCI GEMLT ESG factor model, which means there has been an ESG performance effect in global equity markets that cannot be attributed to traditional factors.

Our fundamental performance analysis looked at whether the observed outperformance was due to a relative increase in valuation levels of companies with higher MSCI ESG Ratings over lower-rated ones (which could be an indication of a self-fulfilling “bubble” in companies with higher ESG ratings) or due to better earnings fundamentals. We observed that the outperformance was not driven by valuation effects but by better earnings growth and higher dividend yields of companies with higher MSCI ESG Ratings.

We also looked at the historical performance of standard MSCI ESG indexes in global equity markets. We observed that during the study period, all standard MSCI ESG indexes showed an outperformance over their MSCI ACWI parent index. Using performance attribution based on the MSCI GEMLT ESG model, we found that performance was partly due to the ESG factor return and partly due to other style and industry factors.

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Introduction

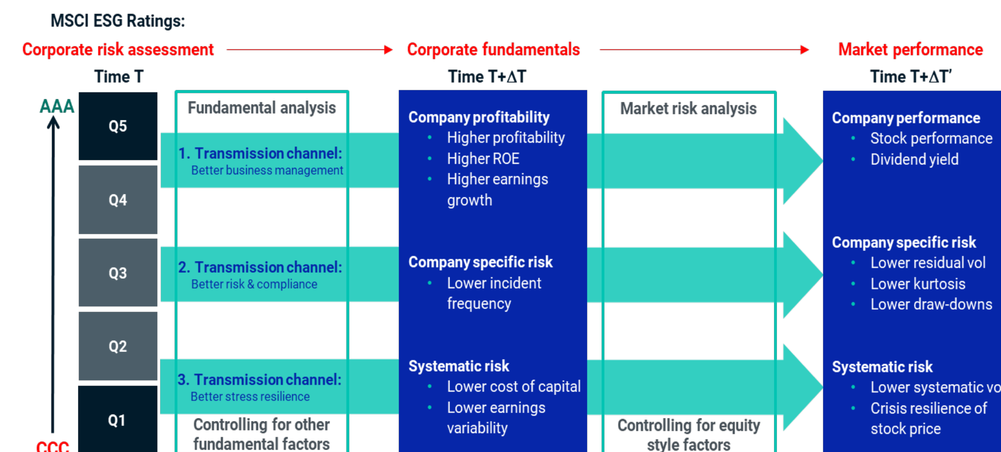
The objectives and scope of different methodologies for ESG ratings in the market vary; and, not surprisingly, their impact on the performance of portfolios can vary substantially too (Friede et al. 2015, Berg et al. 2023). Unlike the approach of many other ESG scoring systems, MSCI ESG Ratings' methodology is focused purely on measuring companies' exposure to and management of financially material risks and opportunities that could potentially affect their earnings and therefore their stock or bond price.

MSCI ESG Ratings have been in place for global developed equity markets (as measured by the MSCI World Index) since 2007 and for global developed and emerging markets (the MSCI ACWI Index) since 2013. Given this history of over 11 years of ratings, questions investors often ask are centered around performance: How have MSCI ESG Ratings performed since their inception and how have the related MSCI ESG indexes performed?

In this paper, we provide a review of MSCI ESG Ratings covering fundamental performance (i.e., earnings), stock-price performance and risk characteristics, as well as the corresponding review of the performance of MSCI ESG indexes. Looking at both fundamental and market-price performance is essential since there are important differences between MSCI ESG Ratings and traditional market risk factors such as momentum or value. While market-risk factors are a direct assessment of a stock's market risk, MSCI ESG Ratings are a corporate risk assessment.

A complete performance analysis should therefore assess the transmission channels from differences in ESG characteristics to differences in corporate fundamental performance to market-price performance, as proposed in Giese et al. (2018) and summarized in Exhibit 1. Here, the authors identified and tested three transmission channels, covering performance, company-specific risks and the systematic risks companies are exposed to. Simply put, transmission channels help to explain to what extent any differences observed in market risk and performance between companies with high and low MSCI ESG Ratings may be due to differences in corporate fundamentals, such as a company's ability to drive earnings or protect their earnings from business risks. In this paper, we therefore consider both the corporate fundamental performance and market performance of companies in the MSCI ACWI Index.

Exhibit 1: Transmission channels of how ESG may affect financial performance and risk



Source: MSCI ESG Research

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MSCI ESG Ratings and stock-price performance

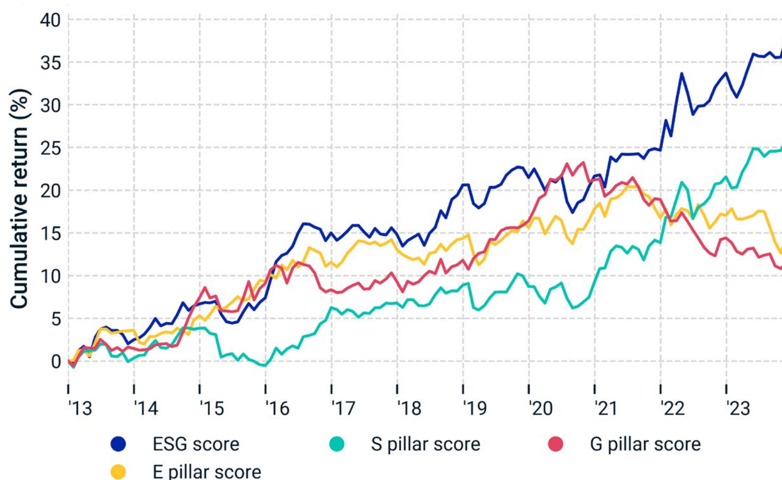
One of the most-used approaches to test the impact of an indicator on market-price performance is quintile analysis. To be precise, we sorted companies in the MSCI ACWI universe according to their industry-adjusted ESG scores. To also control for size and regional biases, these industry-adjusted scores were further adjusted for company size (Exhibit A1 in appendix) and region — North America, Europe, Pacific and EM. The quintiles therefore reflect companies according to their industry-, size- and region-adjusted ESG scores. Our analysis used equal-weighted quintiles to ensure performance results were not driven by a few large caps such as Apple Inc. or Microsoft Corp.

Exhibit 2 shows that companies in the highest quintiles for MSCI ESG Ratings for the MSCI ACWI Index have consistently outperformed those companies in the lowest quintile over the last 11 years.

It is worth highlighting that while all three pillars — E, S and G — showed a positive performance effect over the study period, their aggregate scores showed the strongest performance effect. In addition, the performance of the total MSCI ESG Ratings was also more consistent over time than the individual pillars whose performance showed greater variation. This variation at pillar level can be explained by the stronger residual exposures of pillar scores to other financially relevant factors (such as industry or countries) than for the total ESG score. We will investigate factor exposures in the next section.

Overall, the results indicate that the industry-specific aggregation of E, S and G key issues has added financial value and consistency over time. Previous research by Lee et al. (2020) has shown that this added value came from the industry-specific selection and weighting of key risk issues in the MSCI ESG Ratings methodology. For instance, the authors showed that a hypothetical ESG-rating methodology that simply equal weights E, S and G pillar scores for each company in the rating would not have shown outperformance at the aggregate ESG-rating level.

Exhibit 2: Cumulative performance of highest- vs. lowest-rated ESG quintiles in the MSCI ACWI Index



Quintiles are created every month based on adjusted scores: Pillar scores are first z-scored by Global Industry Classification Standard (GICS®) sector and region (North America, Europe, Pacific and EM subindexes of the MSCI ACWI Index) and then size-adjusted. For industry-adjusted ESG scores, we controlled for size and region bias. The next month's performance (in local return) of the quintiles is calculated. The graph shows the cumulative difference between the top and bottom quintiles' performance. Data from Dec. 31, 2012, to Dec. 29, 2023. Source: MSCI ESG Research

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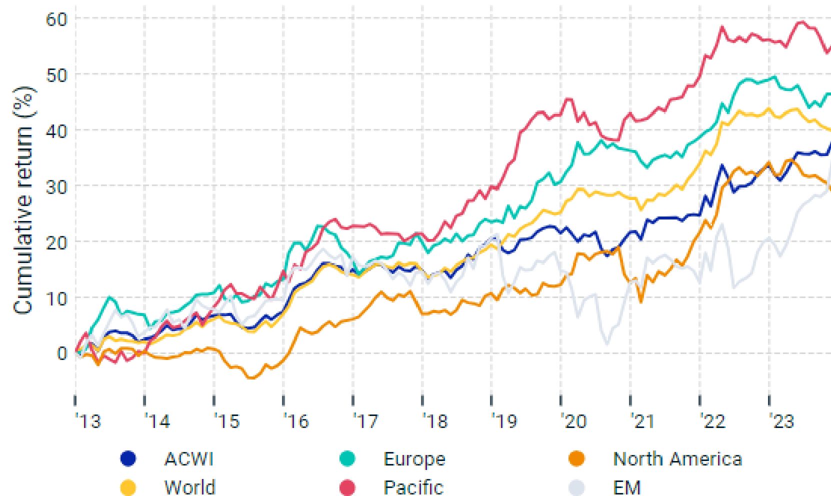
It is worth noting that the outperformance of top-ESG-rated companies over their bottom-rated peers was consistent across both developed markets (DM) — Europe, North America and Pacific — and EM, as shown in Exhibit 3.

Exhibit 3: Cumulative performance of highest- vs. lowest-rated ESG quintiles in sub-regions



Quintiles are created every month based on adjusted scores: Industry-adjusted ESG scores are size-adjusted and quintiles are created per region (North America, Europe, Pacific and EM subindexes for MSCI ACWI and North America, Europe and Pacific for MSCI World). Europe, North America, Pacific and EM are only size-adjusted. The next month's performance (in local return) of the quintiles is calculated. The graph shows the cumulative difference between the top and bottom quintiles' performance. Data from Dec. 31, 2012, to Dec. 29, 2023. Source: MSCI ESG Research

Comparing regional performance, we found that the Pacific region showed the strongest level of outperformance while North America showed the lowest. In aggregate, the performance of EM was similar to DM, though slightly lower.

ESG factor performance

One of the limitations of quintile analysis is that we are not able to control for all other factor exposures, e.g., equity style factors. For instance, previous research (Giese et al. 2021) found that MSCI ESG Ratings' positive correlation to the quality and residual-volatility factors was relevant for explaining performance results of ESG portfolios.

To probe deeper into the performance of MSCI ESG Ratings, we integrated the z-scores of MSCI ESG scores (ranging from -3 to 3) on the global MSCI ACWI IMI universe into the MSCI Barra factor model (the MSCI GEMLT ESG model). This allowed us to disentangle the ESG performance from the performance of all other factors, as shown in Exhibit 4. We observed that the cumulative ESG factor performance was about 5% per unit of factor exposure (which ranges from -3 to 3) over the observation period. This means that there has been a positive performance effect of MSCI ESG Ratings in global equity markets that cannot be explained by traditional equity factor exposures.

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Exhibit 4: Cumulative factor return (%) per unit of factor exposure of MSCI ESG z-scores

The chart shows the cumulative performance of the MSCI ESG factor (defined as the z-score of the MSCI ESG industry-adjusted ESG score) in the MSCI Global Equity Factor Model + ESG (GEMLT ESG) model per unit of factor exposure. Data from Dec. 31, 2012, to Dec. 29, 2023. Source: MSCI ESG Research

We also observed that the ESG factor performance showed considerable volatility over the study period with some very strong performance years (e.g., 2019 and 2020) and some years showing underperformance (e.g., 2015 and 2023). One of the reasons for this volatility is the fact that in the underlying multilinear regression-model, performance results are influenced by many other factors in the model, some of which can be quite volatile.

In the following section we analyze to what extent these findings from the factor model are in line with companies' fundamental earnings performance in the MSCI ACWI Index.

Fundamental performance

Based on the transmission channels outlined in Exhibit 1, we probed deeper into the fundamental explanation for the observed performance characteristics of MSCI ESG Ratings. One of the key questions we wanted to assess is whether the positive performance contribution could be caused by market crowding in companies with high MSCI ESG Ratings, which could put investors in ESG portfolios at risk. To assess these questions, Giese et al. (2021) proposed to decompose total equity returns of ESG portfolios into three fundamental drivers: earnings growth, multiple expansion and dividend yields:

$$\text{Total equity return} = \underbrace{\text{earnings growth} + \text{P/E expansion}}_{\text{price return}} + \text{dividend yield} \qquad (1)$$

Market crowding in companies with high MSCI ESG Ratings would manifest itself in price-to-earnings (P/E) expansion driving stock returns. The authors found however that during the study period from May 2013 till November 2020, the outperformance of companies with high MSCI ESG Ratings in the MSCI ACWI universe was mainly due to higher levels of earnings growth and slightly higher dividend yields, while there was no sign of P/E expansion driving outperformance.

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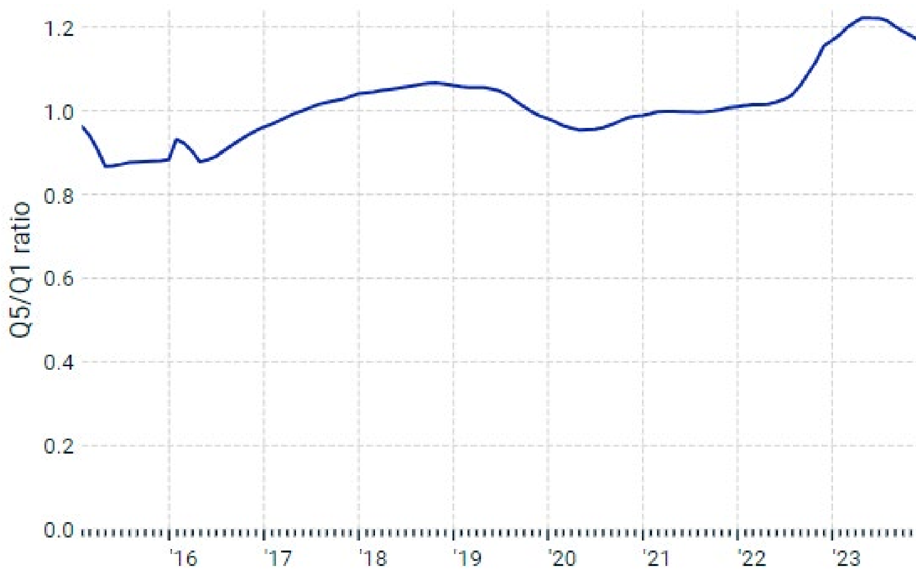
To assess whether this observation still held between 2013 and 2023, we looked at the time series of the quintile 5 to quintile 1 ratio of earnings over stock price. If this ratio increases over time, it means that companies with higher MSCI ESG Ratings have been growing earnings per unit of market cap at a faster rate than lower-rated companies. By contrast, if the ratio is falling, it means that higher-rated companies have seen a relative expansion in valuation multiple compared to lower-rated companies.

The analysis in Exhibit 5 shows that, on average, the earnings-per-price ratio has been volatile but increasing during the study period, which means there was no evidence of crowding in companies with high MSCI ESG Ratings driving performance. Instead, performance was led by earnings growth.

Exhibit 5: Trend of earnings / price ratio of quintile 5 vs quintile 1 in the MSCI ACWI Index



Quintiles are created every month based on adjusted scores: ESG score is size-adjusted and quintiles are created per region (North America, Europe, Pacific and EM subindexes of the MSCI ACWI Index). Trend is calculated using three-year moving averages of earnings per share for each quintile. Data from Jan. 1, 2013, to Dec. 29, 2023. Source: MSCI ESG Research

We also looked at differences in dividend yields from two angles. First, whether ESG scores at time t were predictive of higher dividend yields over the following period [t, t+1y]. The corresponding quintile analysis (Exhibit A2 in appendix) showed companies with higher MSCI ESG Ratings did display higher dividend yields over the following one-year period.

Second, we looked at the simultaneous return decomposition at time t into changes in valuation, earnings growth and dividend yield over the same time period. Therefore, in addition to the valuation term shown in Exhibit 5 we looked at the ratio of dividend yields for quintile 5 versus quintile 1 (Exhibit 6).

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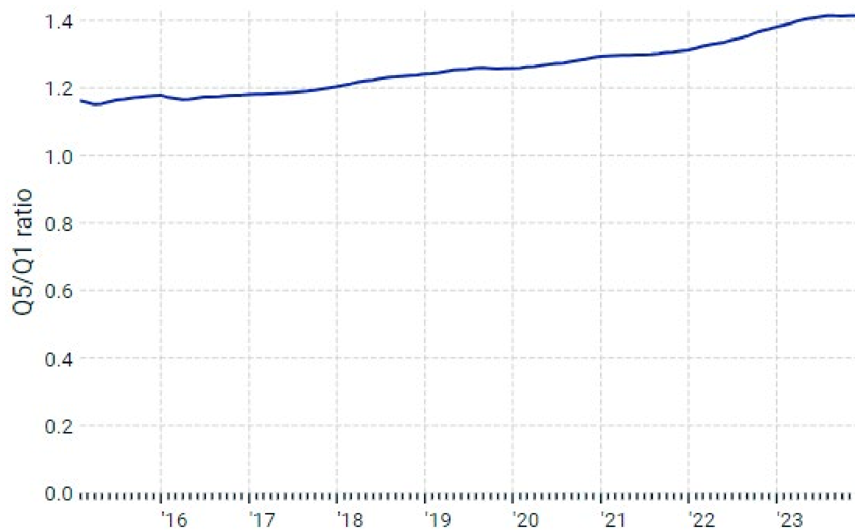
Exhibit 6: Trend of dividend yield of quintile 5 vs. quintile 1 in the MSCI ACWI Index



Quintiles are created every month based on adjusted scores: ESG score is size-adjusted and quintiles are created per region (North America, Europe, Pacific and EM subindexes of the MSCI ACWI Index). Trend is calculated using three-year moving averages of dividend yield for each quintile. Data from Jan. 1, 2013, to Dec. 29, 2023. Source: MSCI ESG Research

We found higher and slightly increasing dividend yields for companies with higher MSCI ESG Ratings compared to those with lower ratings, which means the quintile 5 versus quintile 1 difference between total equity returns was higher than the difference in price return.

MSCI ESG Ratings’ performance across sectors

MSCI ESG Ratings adopt a highly industry-specific approach in that in each industry the most financially material key issues are selected when calculating the ratings. Looking at the performance of MSCI ESG Ratings per sector is therefore important to assess to what extent the selected key issues actually materialized in stock-price performance.

We looked at quintile performance differences per sectors in the MSCI ACWI Index using size- and regional-adjusted ESG scores as before (Exhibit 7).

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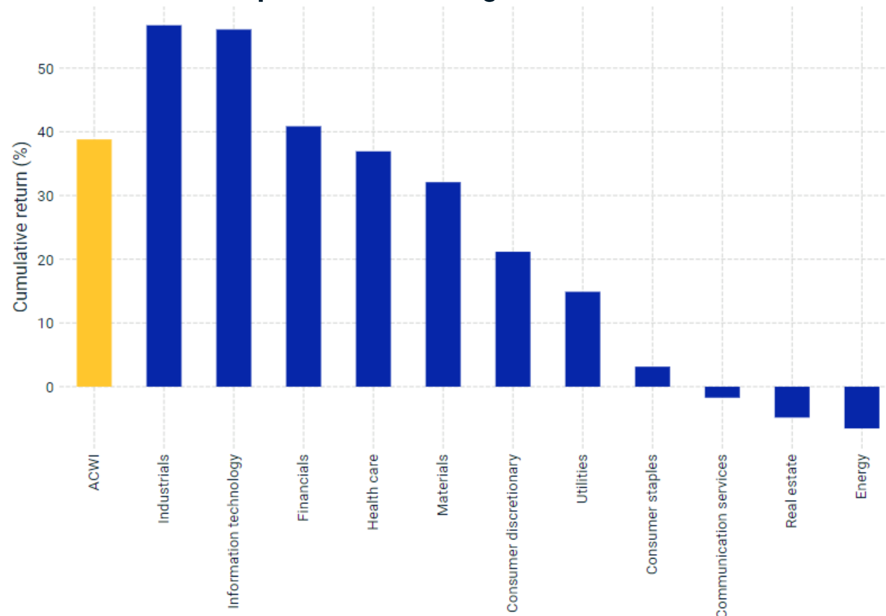
Exhibit 7: Cumulative performance of highest- vs. lowest-rated ESG companies across sectors



Quintiles are created every month based on adjusted scores: Industry-adjusted ESG scores are size-adjusted and quintiles are created per region (North America, Europe, Pacific and EM subindexes of the MSCI ACWI Index). The next month's performance (in local return) of the quintiles is calculated. The graph shows the cumulative difference between the top and bottom quintiles' performance. Data from Dec. 31, 2012, to Dec. 29, 2023. Source: MSCI ESG Research

We noted substantial differences in performance across sectors with companies with higher MSCI ESG Ratings outperforming in eight out of 11 sectors. Of the other three sectors, consumer staples showed a flat performance, while energy and real estate showed a slight underperformance.

It is interesting to highlight the performance of the three most carbon-intensive sectors: energy, utilities and materials. The awareness of climate transition as a potential risk in carbon-intensive sectors has increased over the past decade, and consequently companies' exposure and management of climate-transition risks has a higher relative weight in the MSCI ESG Ratings assessments here than in other sectors, as shown in previous research.

The materials and utilities sectors showed a clear outperformance for companies with a high MSCI ESG Rating — in line with the intuition that climate change is an increasingly important risk — while in the energy sector the performance difference was slightly negative, despite it being one of the most exposed sectors in the climate transition.

To probe deeper into what could explain this performance difference in carbon-intensive sectors, we looked at sector performance in DM and EM separately (Exhibit A3 in appendix), which showed an interesting result: In all three carbon-intensive sectors in DM, companies with higher MSCI ESG Ratings clearly outperformed, while in EM the reverse was true and these companies underperformed.

What could explain this discrepancy between DM and EM?

In both DM and EM, we saw increasing levels of climate-related policies and regulation to promote the low-carbon transition of the economy. EM and DM are however at different stages in their shift away from fossil fuels. For instance, EM have higher relative exposure to coal and many of these countries are still expanding the use of coal for energy production (Shakdwipee et al. 2023) — in parallel with increasing their use of renewable energy sources. One conjecture that may explain the observed performance difference between DM and EM is therefore the different policy and market environment for carbon-intensive activities.

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MSCI ESG Ratings' performance in developed markets

MSCI ESG Ratings' history in DM is longer than in EM, dating back to 2007. We therefore ran the quintile performance analysis for the DM equity universe as defined by the MSCI World Index, shown in Exhibit 8. The analysis was size- and region-neutral based on three DM subregions: North America, Europe and Pacific.

Exhibit 8: Performance of highest- vs. lowest-rated ESG quintiles in the MSCI World Index

Quintiles are created every month based on adjusted scores: Industry-adjusted ESGs scores are size-adjusted and quintiles are created per region (North America, Europe and Pacific subindexes of the MSCI World Index). The next month's performance (in local return) of the quintiles is calculated. The graph shows the cumulative difference between the top and bottom quintiles' performance. Data from Dec. 29, 2006, to Dec. 29, 2023. Source: MSCI ESG Research

The analysis over a 17-year period showed similar results as in global markets over an 11-year period: Companies with higher MSCI ESG Ratings outperformed their lower-rated counterparts with similar levels of variation: There were some years of very strong outperformance (e.g., 2016, 2021 and 2022) and some years with underperformance (e.g., 2010, 2011 and 2023).

MSCI ESG Ratings' performance during times of crisis

MSCI ESG Ratings have not only been studied in terms of their relevance for financial performance but also for their risk characteristics. Our previous research (Giese et al. 2019), based on a similar quintile analysis, showed that companies with high MSCI ESG Ratings had lower levels of stock-specific risk (as measured by their residual volatility, stock-price kurtosis or likelihood of extremely large drawdowns) and lower levels of systematic risks (as measured by variability of corporate earnings or systematic stock-price volatility in the MSCI GEMLT factor model).

While these results are conceptually important, investors may be more interested to understand whether MSCI ESG Ratings have shown outperformance when actual risks occur. During the 11-year study period, two major crises happened: the COVID-19 pandemic in 2020 and the outbreak of the Russia-Ukraine war in 2022. Both crises led to a huge repricing of equities as well as strong sectoral shifts. For example, the Russia-Ukraine war led to a strong boom in energy stocks.

Exhibit 9 compares the pure ESG factor return in the global GEMLT ESG factor model and the corresponding U.S. model for the study period to the factor return during 2020 and 2022.

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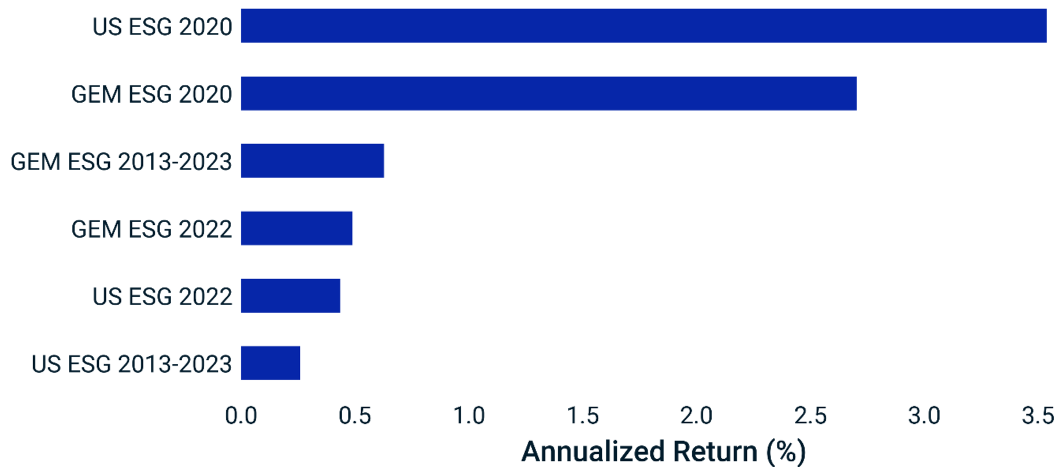
Exhibit 9: ESG factor performance for global and US markets



GEM ESG refers to the ESG factor in the MSCI Global Equity Factor Model, US ESG refers to the ESG factor in the MSCI USA Equity Factor Model. Data as of Dec. 29, 2023. Source: MSCI ESG Research

It is interesting to note that during both crises, the ESG factor return in the global model and U.S. model has been positive. This means during both crises, positive exposure to companies with higher MSCI ESG Ratings (all other factors being controlled for) added financial performance. There is a difference, however, in the extent of this performance effect: During the COVID-19 pandemic in 2020, the ESG factor return was higher than in any other year during the study period, while during the outbreak of the Russia-Ukraine war it was positive but below the 11-year average.

Performance of MSCI ESG indexes

MSCI ESG Ratings have been used in the calculation of various MSCI ESG indexes. These indexes are based on the parent (MSCI ACWI Index or a regional sub-index) and companies selected or weight-tilted based on their MSCI ESG Ratings, as explained in the note under Exhibit 10. The study period for this analysis starts at the end of May 2013 when the live track record of the MSCI ACWI ESG Leaders Index started (the live track coverage of the MSCI ACWI Index with MSCI ESG Ratings started at the end of 2012).

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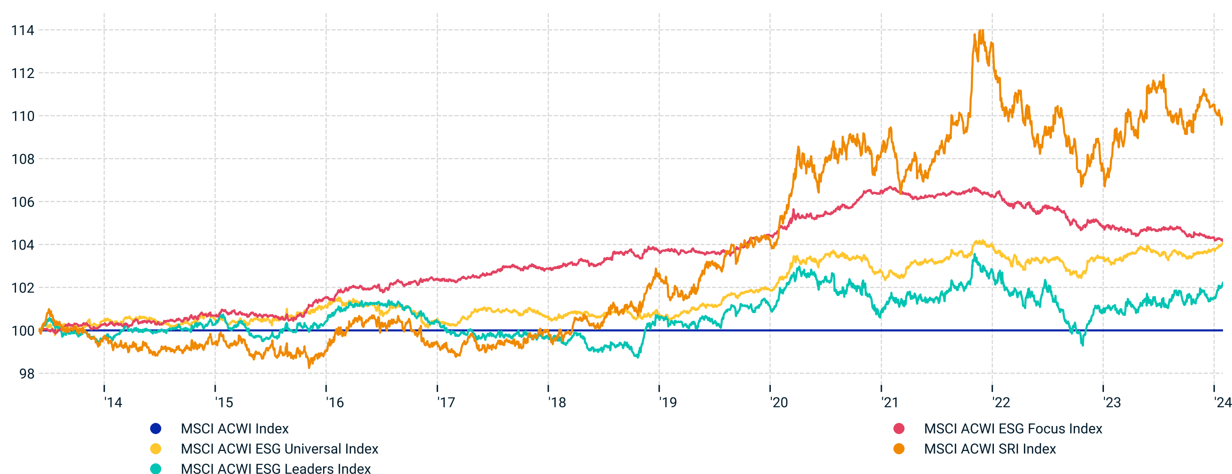
Exhibit 10: Active performance of MSCI ESG indexes vs. the MSCI ACWI Index



The MSCI ESG Universal Index represents an ESG-weight-tilt approach; MSCI ESG Leaders Index uses a 50% best-in-class sector approach; MSCI SRI Index uses a 25% best-in-class sector approach; and MSCI ESG Focus Index uses an optimized approach designed to maximize ESG exposure. The data shows the actual performance for each index plus back-tested performance for those indexes with less than 10 years of track record. MSCI ACWI ESG Leaders Index has been live since June 6, 2013; MSCI ACWI SRI Index since March 24, 2014; MSCI ACWI ESG Universal Index since Feb. 8, 2017; MSCI ACWI ESG Focus Index since June 25, 2018. Data from May 31, 2013, to Dec. 29, 2023. Source: MSCI ESG Research

Exhibit 10 shows the actual performance of the MSCI ACWI ESG Leaders Index plus back-tested performance for those indexes with less than 10 years of track record. All MSCI ESG indexes were observed to outperform their benchmark. The performance attribution in Exhibit 11 shows that this outperformance can partially be attributed to the MSCI ESG Ratings and partially to other equity style-factor exposures.

Exhibit 11: Active performance attribution for MSCI ESG indexes

	MSCI ACWI ESG Universal	MSCI ACWI ESG Leaders	MSCI ACWI ESG Focus	MSCI ACWI ESG SRI
Active	0.38	0.16	0.44	1.04
Styles	0.33	0.32	0.36	0.43
of which ESG	0.10	0.15	0.18	0.28
Industries	0.18	0.07	-0.01	0.04
Countries	0.06	0.05	-0.01	0.00
Specific	0.00	-0.24	0.14	0.70

Factor attribution based on MSCI GEMLT ESG model. Data from May 31, 2013, to Dec. 29, 2023. Source: MSCI ESG Research

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We also looked at the performance of MSCI ESG indexes in the four subregions — the U.S.,[1] Europe, Pacific and EM (Exhibit A4 in appendix). We found that all ESG index variants in all regions had positive outperformance over their respective parent index with only two exceptions: The MSCI North America ESG Leaders and the MSCI Pacific SRI Indexes showed a slight underperformance. However, the corresponding performance attribution (Exhibit A3 in appendix) revealed that for all indexes in all four subregions the MSCI ESG Rating had shown a positive contribution to performance and the related underperformance of the two aforementioned indexes was due to other factor exposures.

Previous research (Nagy and Giese 2020) has also illustrated that the MSCI ESG indexes had especially strong outperformance versus their parent index during the outbreak of the COVID-19 pandemic in the first quarter of 2020, before and after controlling for other equity style-factor exposures.

Conclusion

In 2023, the history of MSCI ESG Ratings reached 11 years in global markets and 17 years in DM. Our performance analysis in global and DM has shown that companies with higher MSCI ESG Ratings have outperformed their lower-rated counterparts both before and after controlling for region, size and equity style-factor exposures. We also observed that this performance was not due to increasing valuation levels, which could be an indication of crowding in companies with higher MSCI ESG Ratings. Instead, the positive performance was mainly due to better earnings fundamentals. The positive performance contribution was also observed during crises — the COVID-19 pandemic and the outbreak of the Russia-Ukraine war.

The observed performance of MSCI ESG Ratings was also noticeable in MSCI ESG indexes that use MSCI ESG Ratings to either tilt or select components within the parent MSCI ACWI Index according to their ESG profile. During the study period, most of these indexes outperformed their benchmark and all of the indexes outperformed their benchmark after controlling for equity style-factor exposures.

[1] We used USA instead of North America since all standard MSCI ESG indexes exist in regional versions for the USA but not for North America.

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Appendix

Exhibit A1: Size Adjustment of ESG Descriptors

Calculation process
Regarding the MSCI ESG scores as well as E, S, and G pillar scores and underlying Key Issue scores, we neutralized the observed positive correlation to size by using the following regression process:

Let S_{it} denote the ESG descriptor of company *i* at time *t* to be size-neutralized, and let $Mcap_{it}$ denote its market capitalization in USD at time *t*.

Then, for every year *t* in our study period, we estimate a linear regression model across the benchmark universe of companies B_t of the following form:

$$S_{it} = a_t + b_t \log(Mcap_{it}) + \varepsilon_{it} \quad \forall\, i \in B_t.$$

The monthly regression coefficients a_t and b_t are estimated using a least-squares methodology. The coefficient b_t indicates the degree of size bias in the ESG descriptor at time *t*.

Definition of size-adjusted descriptors
From the construction, the company-specific residuals ε_{it} of the regression show no correlation to the size of companies in the benchmark universe. Therefore, we employed these residuals as size-adjusted ESG-descriptors $\tilde{S}_{it}$:

$$\tilde{S}_{it} = \varepsilon_{it} \quad \forall t, i \in B_t$$

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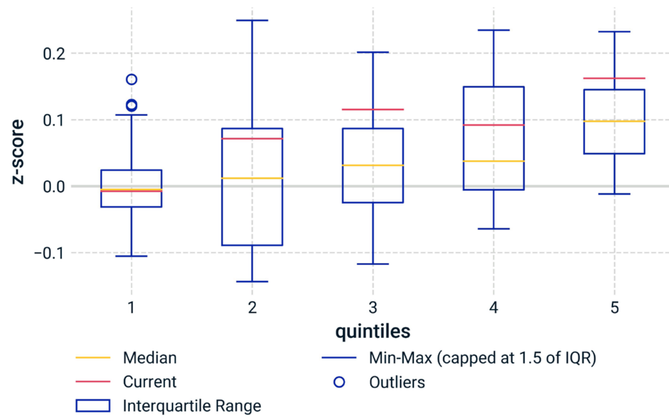
Exhibit A2: Dividend yield per ESG score quintile in MSCI ACWI



Size- and region-adjusted ESG score quintiles are created at time t and the realized dividend yield over the following one-year period is measured per quintile. Data from Dec. 31, 2012, till Dec. 29, 2023. Source: MSCI ESG Research

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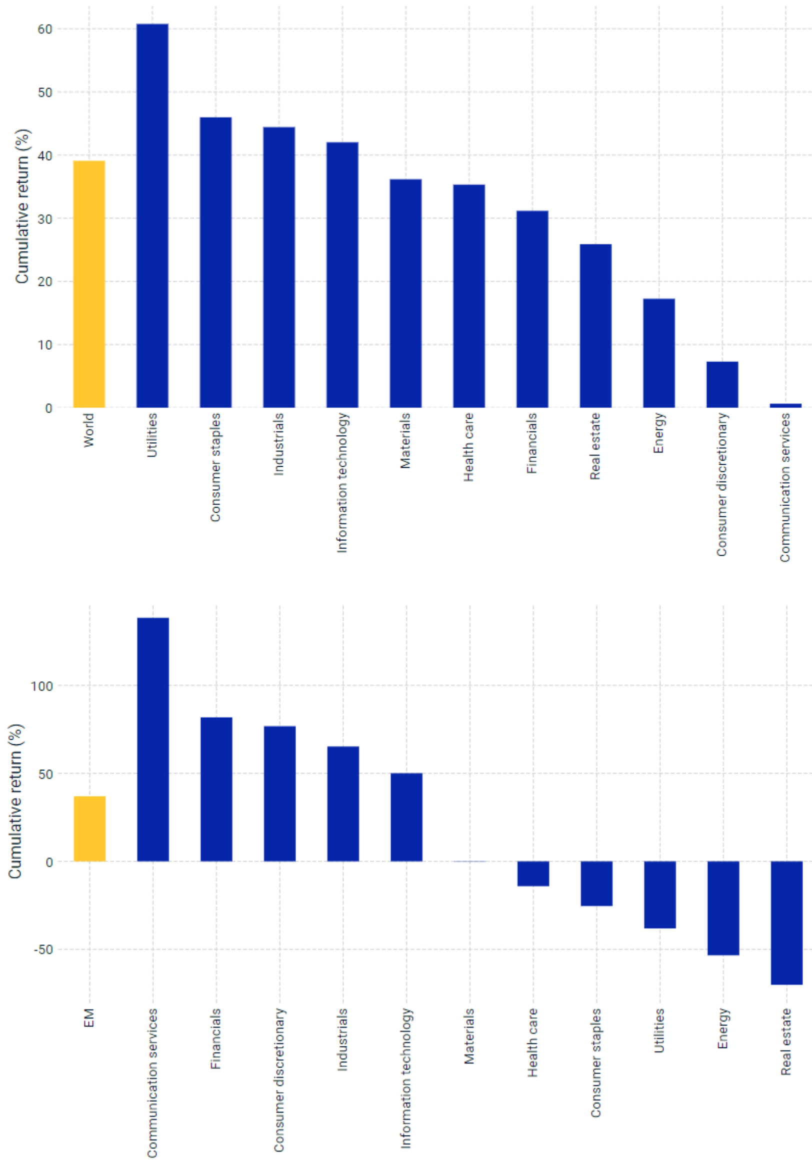
Exhibit A3: Cumulative performance of top- vs. bottom-rated companies across sectors in developed markets (above) and emerging markets (below)



Data from Dec. 31, 2012, to Dec. 29, 2023. Source: MSCI ESG Research

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Exhibit A4: Active performance attribution for MSCI ESG indexes in four subregions

	North America ESG Leaders	North America SRI	North America ESG Universal
Active	-0.16	0.87	0.37
Styles	0.31	0.37	0.23
of which ESG	0.16	0.28	0.09
Industries	0.03	-0.13	0.29
Countries	0	-0.02	0
Specific	-0.47	0.71	-0.09

	EM ESG Focus	EM ESG Leaders	EM SRI	EM ESG Universal
Active	0.6	0.97	1.77	0.33
Styles	0.43	0.39	0.71	0.24
of which ESG	0.21	0.15	0.31	0.08
Industries	0.01	0.27	0.52	0.03
Countries	0.02	-0.37	-0.27	-0.15
Specific	0.2	0.59	1.02	0.19

	Pacific ESG Leaders	Pacific SRI	Pacific ESG Universal
Active	0.01	-0.24	0
Styles	0.27	0.33	0.16
of which ESG	0.15	0.28	0.08
Industries	-0.08	-0.12	-0.1
Countries	0.32	0.07	0.04
Specific	-0.14	-0.29	-0.02

	Europe ESG Leaders	Europe SRI	Europe ESG Universal
Active	0.44	1.66	0.53
Styles	0.32	0.39	0.19
of which ESG	0.14	0.23	0.08
Industries	0.17	0.35	0.1
Countries	0.21	0.2	0.17
Specific	-0.18	0.76	0.12

Factor attribution based on MSCI GEMLT ESG model. Data from May 31, 2013, to Dec. 29, 2023. Source: MSCI ESG Research

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