NORTHERN TRUST
ASSET MANAGEMENT

RISK INSIGHTS SERIES

# THE RISK REPORT
## ESG SPECIAL EDITION

**Key findings from a six-year analysis of institutional portfolios through an ESG lens:**

**1,300+**
INVESTMENT STRATEGIES

**$250+** billion
EQUITY PORTFOLIO ASSETS

**88** institutional
INVESTORS

Data as of December 31, 2021.

Institutional investors and their consultants regularly partner with Northern Trust Asset Management and leverage its risk-aware, quantitative investing expertise gained over two decades to provide them with a distinct analysis offering insight on why portfolios haven't delivered on expected outcomes.

Over the past six years, 280 equity portfolios have been analyzed and the aggregated findings are presented in *The Risk Report*.

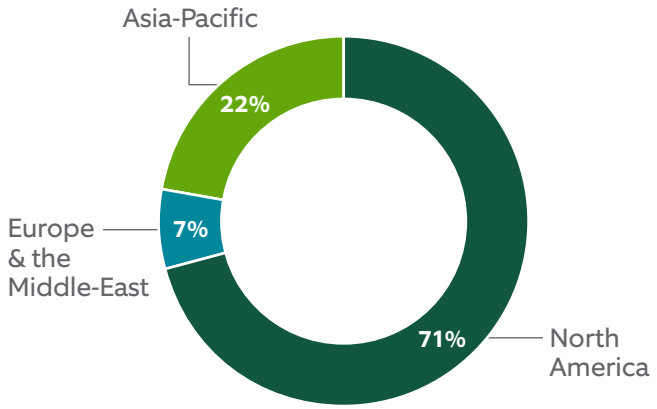
Given an increasing question for investors is "how do ESG-related considerations impact portfolios?," this year we added a new dimension and examined portfolios through an ESG lens. This special edition of *The Risk Report* identifies the five important ESG-related trends we observed.

The portfolios we analyzed ranged in size, geography and investment objectives — while some had specific ESG targets, most did not. Researching this diverse sample allowed us to isolate fundamental ESG risks at the portfolio level, revealing five findings investors should be aware of whether they are intentionally targeting ESG or not.

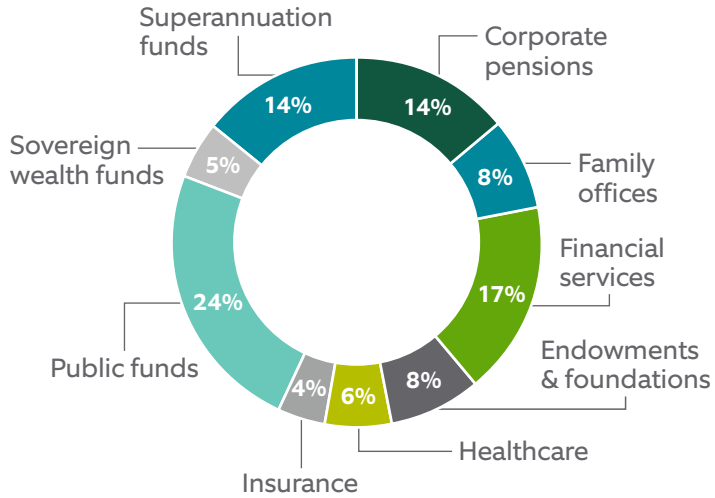
**Here's what we found**

## REPORT DEMOGRAPHICS

### INVESTOR GEOGRAPHY




### INVESTOR TYPE




Source: Northern Trust Asset Management. Data collected and analyzed from December 31, 2015 to December 31, 2021.

# KEY DISCOVERIES

Our comprehensive work with large institutions across the globe presented a distinct opportunity to provide clarity around how ESG may be impacting various asset pools. Five key trends emerged from our analysis.

1 Uncompensated risks were prevalent in portfolios with higher ESG scores.

2 Portfolios with higher ESG scores experienced a greater dilution of active risk.

3 Active managers caused a larger drag on portfolio ESG scores.

4 ESG was highly sensitive to over-diversification.

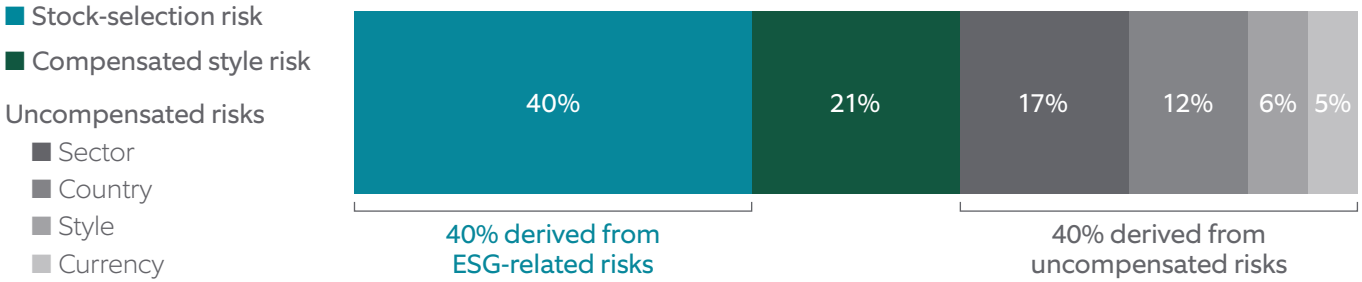
5 Benchmarks outpaced investors on environmental scores, but not governance.

# ONLY 40% OF ACTIVE RISK IN HIGHER ESG-RATED PORTFOLIOS WAS FROM ESG-RELATED SOURCES

Our research showed that portfolios with higher ESG ratings took a significant amount of risk in areas unrelated to ESG. Consequently, they had a high exposure to risks that are typically not compensated.

Active risk is necessary to generate excess returns or to gain higher ESG exposure relative to the benchmark, but not all risks are created equal. Some have been historically proven to generate excess returns over long periods (compensated risks) and some have not (uncompensated risks).

**BREAKDOWN OF ACTIVE RISK IN PORTFOLIOS WITH HIGHER-ESG RATINGS***




**Stock-selection risk (ESG-related risk):**

Specific risk from individual securities, generally derived from fundamental active investment strategies. ESG exposure is a stock-specific attribute and is best quantified through this stock-selection category.

**Compensated style risk:**

Exposures such as small-size, low-volatility, high-momentum, high-value, high-dividend and high-quality securities that have historically outperformed over time, based on academic studies.**

**Historically uncompensated risks:**

- **Sector** — significant over/under-weights to sectors
- **Country** — specific exposures to countries or regions
- **Style** — high-volatility, low-dividend, low-value (expensive), low-quality, low-momentum or large-size securities
- **Currency** — exposure to changes in foreign currencies

Source: Northern Trust Asset Management. Data as of December 31, 2021. Please note, numbers on the page may not sum to 100% due to rounding.

*Higher ESG-Rated Portfolios are determined by ranking all portfolios in the study by ESG score and breaking them into quintiles. Higher-rated portfolios fall into the top quintile. **Choi, James R and Zhao, Kevin. "Did Mutual Fund Return Persistence Persist?" The National Bureau of Economic Research. Issued January 2020.

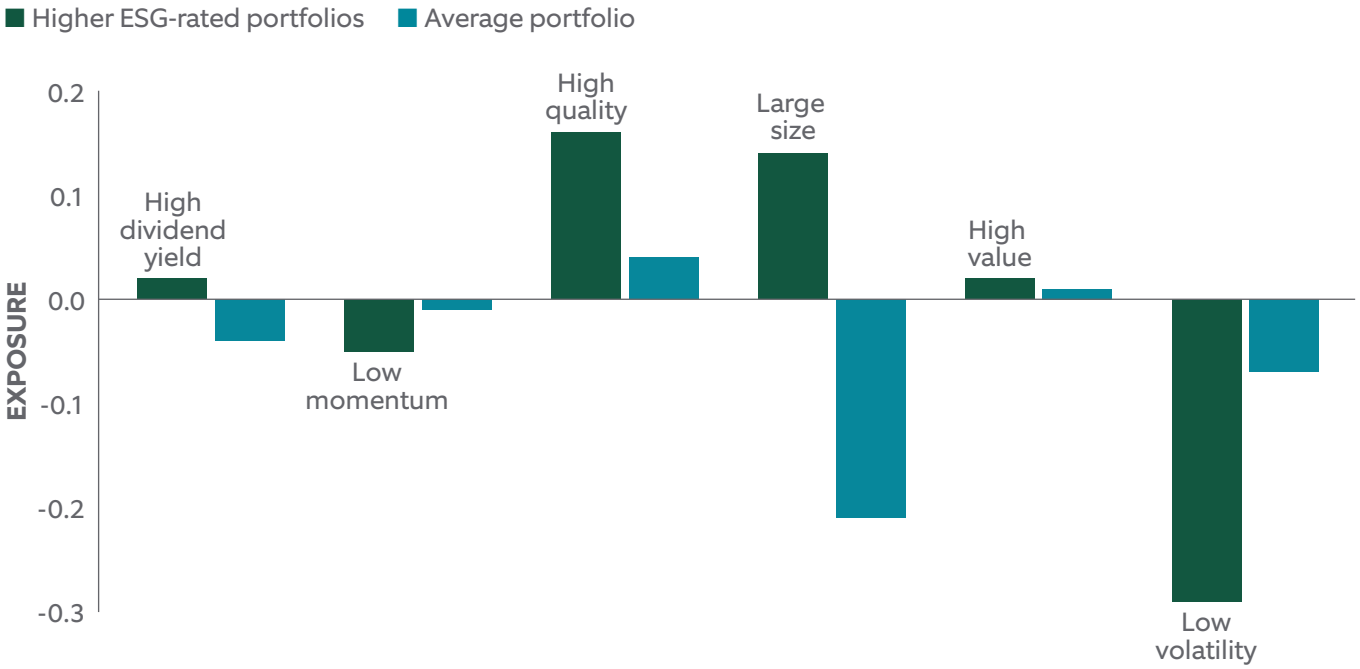
# HIDDEN STYLE RISKS CREATED DIFFERENCES IN PORTFOLIO EXPOSURE

Style tilts generally make up ~30% of a portfolio's active risk, and while that number remained fairly consistent regardless of a portfolio's ESG score, it was the large differences in the individual style exposures that could lead to unintended outcomes.

Portfolios with higher ESG ratings had significantly more exposure to high quality and low volatility compared to the average portfolio. While these style risks tend to be consistent sources of excess return (i.e. compensated risks), the tilts to large size and low momentum are not.

Large differences in style exposures at the portfolio level often occur unintentionally, and can be caused by various style biases from underlying investment strategies. And while the impact of these unintended (or "hidden") risks might not be felt at the individual strategy level, these occurrences compound at the portfolio level and potentially create unwanted outcomes.

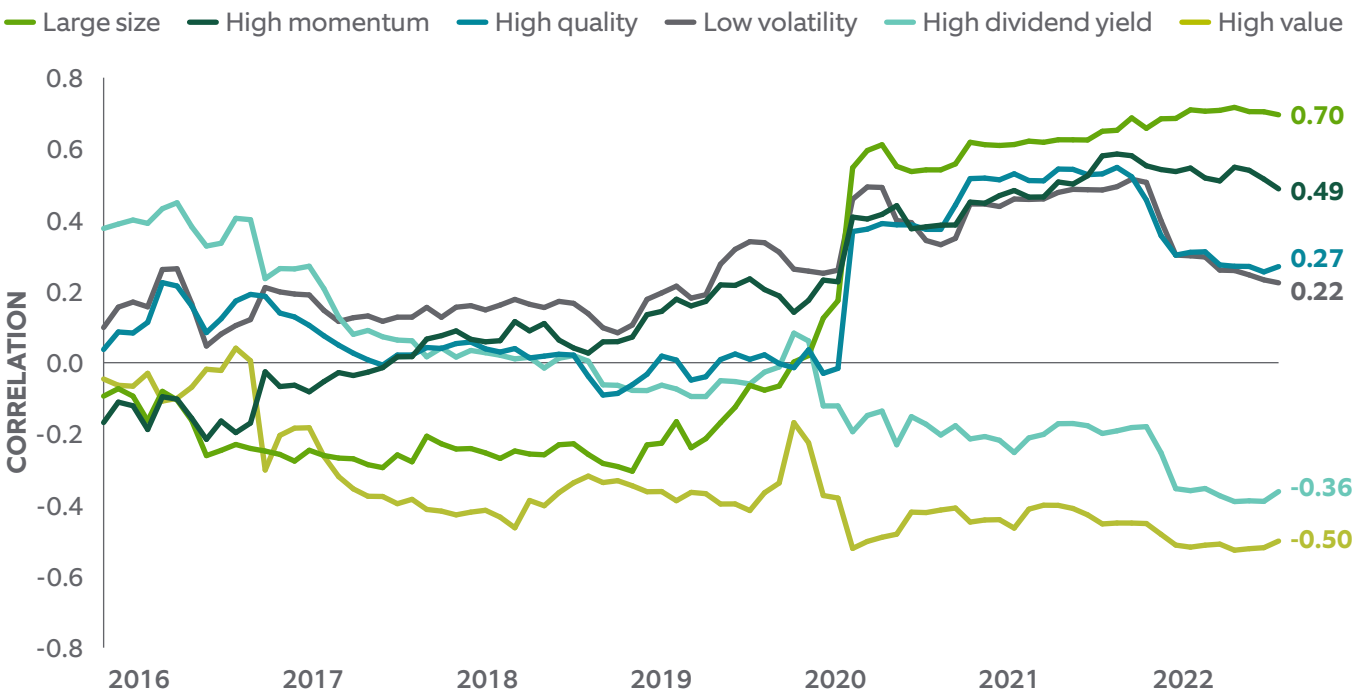
**STYLE BETS ACROSS PORTFOLIOS**




Source: Northern Trust Asset Management. Data as of December 31, 2021. "Exposure" is measured by the z-score, which represents the number of standard deviations from the mean data set.

# RESEARCH INSIGHT:
# THE CHANGING RELATIONSHIP BETWEEN ESG AND STYLE RISKS MAKES UNINTENDED OUTCOMES MORE LIKELY

**MSCI WORLD INDEX HIGHER ESG-RATED PORTFOLIO:**
**THREE-YEAR ROLLING CORRELATIONS BETWEEN ESG AND STYLE RISKS**




Since early 2020, the likelihood that ESG may come with "hidden" style risks has grown.

From 2015 to 2019 there was a relatively low correlation between ESG and most style risks. However, that correlation has now increased significantly — making unintended outcomes more likely.

The phenomenon may be related to the increased appetite for ESG investing sparked by the pandemic. For example, stocks with high ESG ratings had high levels of inflows as many outperformed during that period, which greatly increased their correlation with momentum.

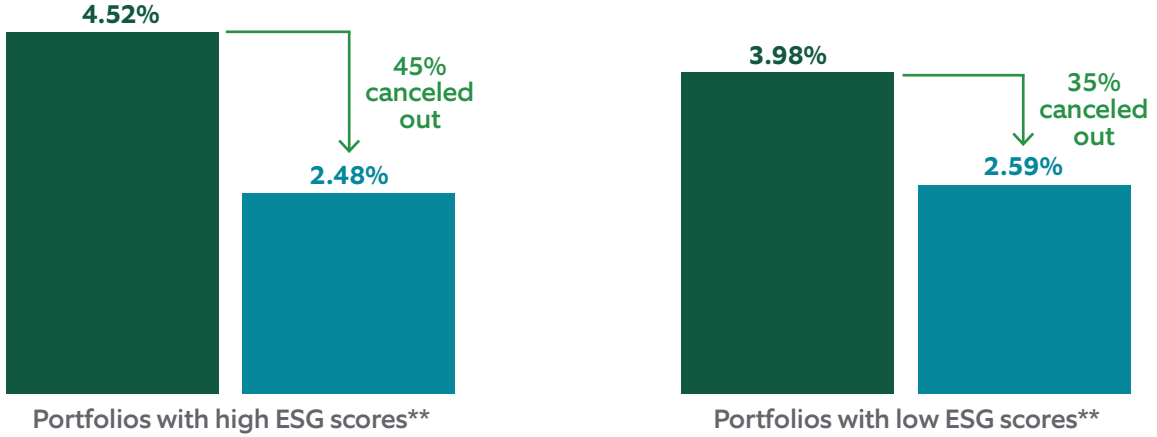
Source: Northern Trust Asset Management. Data as of August 31, 2022. It is not possible to invest directly in any index. Please note: Higher-rated ESG Portfolio represents the top 20% of MSCI World ranked by MSCI ESG IVA Rating score.

# PORTFOLIOS WITH HIGHER ESG SCORES EXPERIENCED A GREATER DILUTION OF ACTIVE RISK

A *cancellation effect* caused by offsetting exposures among underlying holdings reduced the active risk of portfolios with higher ESG ratings by nearly half.

While 45% cancellation is similar to the average cancellation effect we identified in *The Risk Report*, it is significantly higher when compared to portfolios with lower ESG ratings. This higher susceptibility to active risk cancellation is something investors with higher exposure to ESG-related risks should watch out for.

**AVERAGE ACTIVE RISK:**
**UNDERLYING INVESTMENT MANAGERS' VS. AGGREGATE INSTITUTIONAL PORTFOLIO**




## WHAT IS THE CANCELLATION EFFECT?

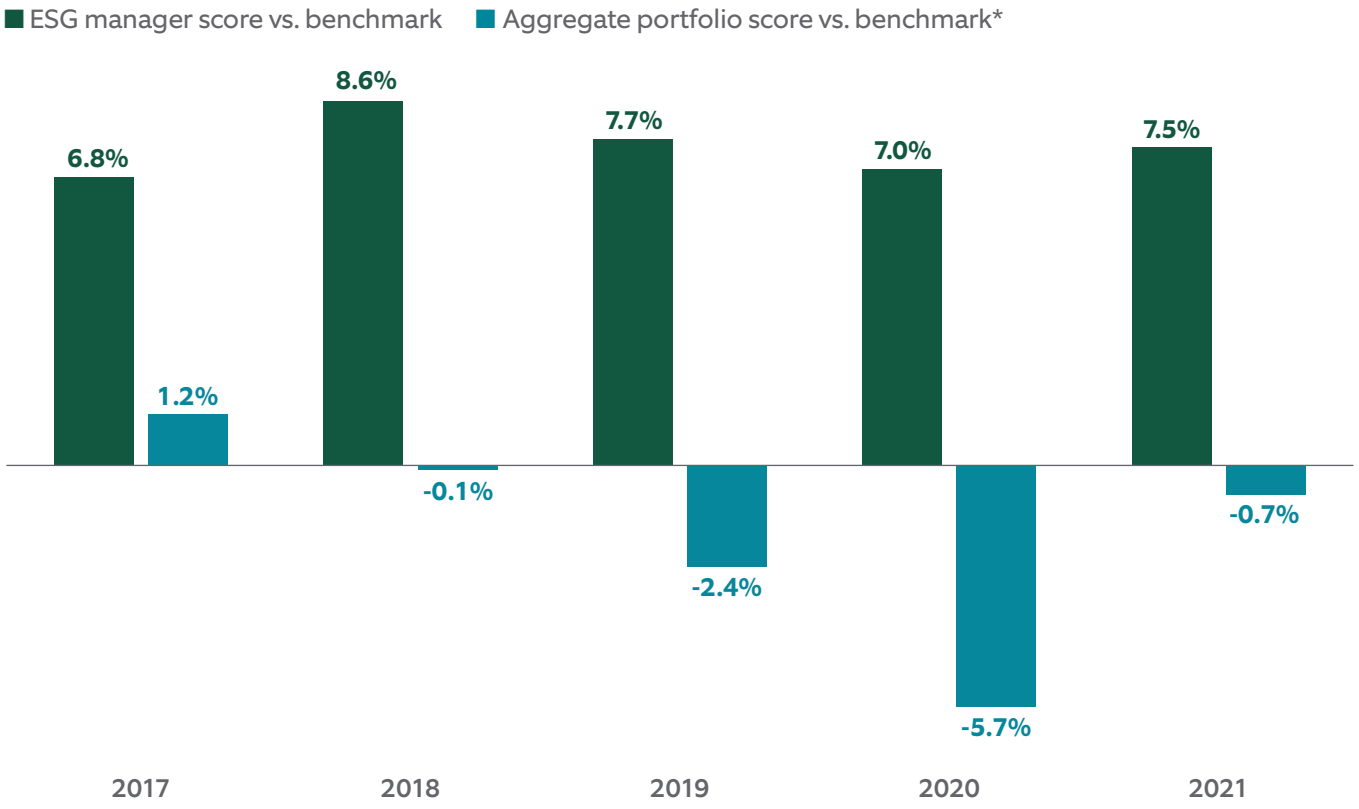
The *cancellation effect* occurs when investment managers within a portfolio take opposing positions (e.g. sector bets, style tilts, etc.) that ultimately offset one another. For example, a manager might take a 3% overweight in a company while another manager takes a 3% underweight, effectively canceling each other out. Or there is high value bias in one strategy that is offset by a high growth bias in another strategy.

*Total manager active risk is the weighted average active risk of all underlying managers in the aggregate portfolio. The number illustrates what the aggregate portfolios' total active risk would be if there was no cancellation effect among underlying managers (i.e. if the managers were perfectly correlated). **A portfolio was categorized as having a "high (low) ESG score" if its overall ESG score ranked in the top (bottom) quintile of all portfolios analyzed in our sample.

Source: Northern Trust Asset Management. Data as of December 31, 2021. Please note: Only portfolios containing two or more investment strategies were considered in the analysis for aggregate portfolio active risk.

# "SLEEVED" APPROACH TO INTEGRATING ESG HAD A MINIMAL IMPACT

**ESG SCORES VS. BENCHMARK BY CALENDAR YEAR**



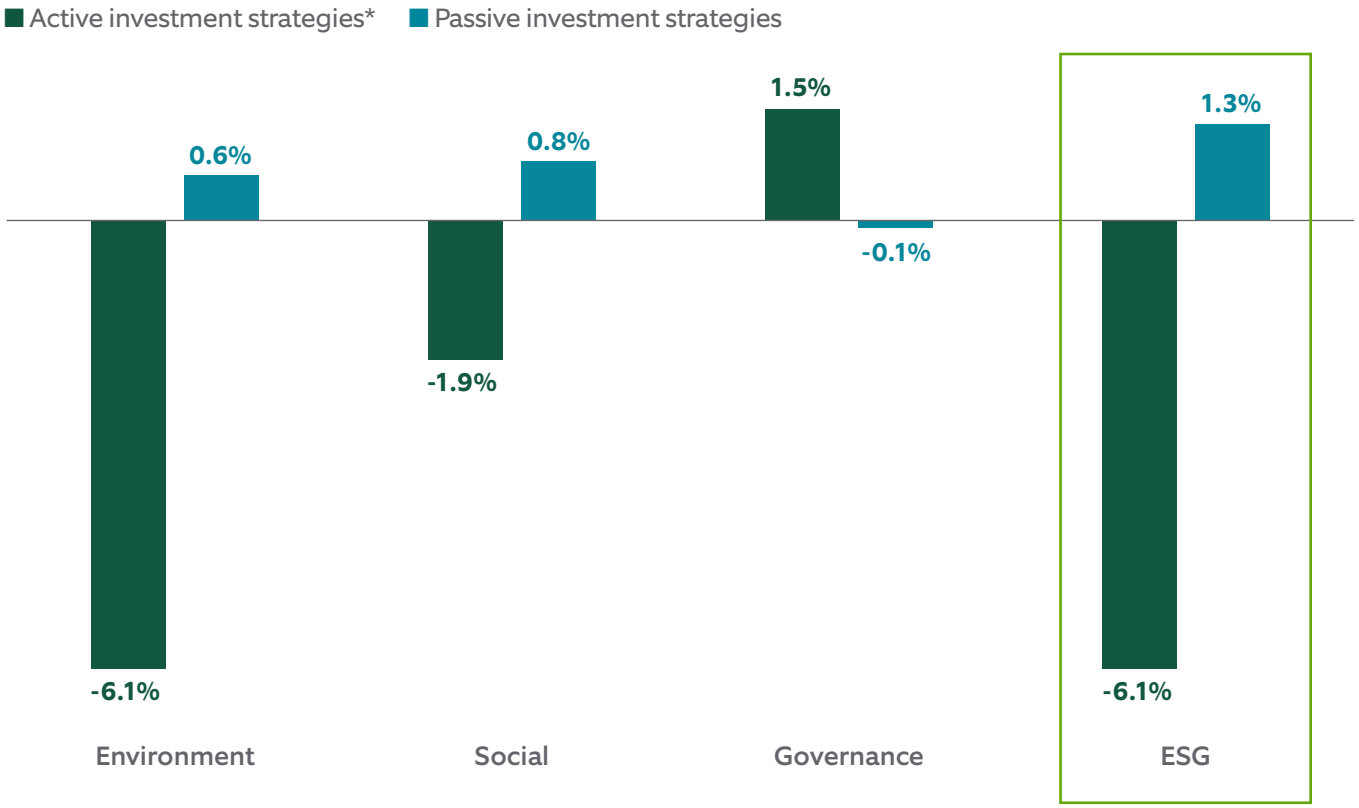

While many institutions did not have specific ESG objectives, there was clear evidence of hiring ESG managers as "sleeved" or "satellite" allocations. Unfortunately, if there were ESG-oriented outcomes intended in those scenarios, it rarely materialized at the portfolio level.

When the ESG managers were combined with the rest of the portfolio, the aggregate ESG score significantly declined due to the *cancellation effect*. While the aggregate portfolio ESG score vs. the benchmark has varied through the years, the impact of the *cancellation effect* has been fairly consistent.

Source: Northern Trust Asset Management. Data as of December 31, 2021. Note: A manager was classified as an ESG manager when their strategy had a higher MSCI ESG IVA Rating Score compared to its benchmark.
*The aggregate portfolios include at least two managers and at least one among them should be an ESG manager.

# ACTIVE MANAGERS CAUSED A LARGER DRAG ON PORTFOLIO ESG SCORES

**MANAGEMENT STYLE IMPACT ON PORTFOLIO ESG SCORES VS. BENCHMARK**




The proportion of active vs. passive investment strategies in a portfolio made a material difference in the overall ESG score — with active managers tending to cause a larger drag.

Most active strategies had a lower overall ESG score due to a significantly lower rating for the environmental pillar. Meanwhile, passive strategies tended to maintain, or even slightly improve, the ESG profile.

This may be explained by the increasing valuations for ESG leaders that have made active managers less willing to own them. Between 2018 and 2021, the price/book differential between ESG leaders and the MSCI World Index nearly doubled.**

Source: Northern Trust Asset Management. Data as of December 31, 2021.

*Active investment strategies is defined as if the Active Risk of the manager relative to their stated benchmark is higher than 2.5%. The active MSCI ESG IVA Rating Score (%) used in above chart are averages across the Active and Passive portfolios from the sample set. **Top 20% of MSCI World stocks ranked by MSCI ESG IVA Rating score.

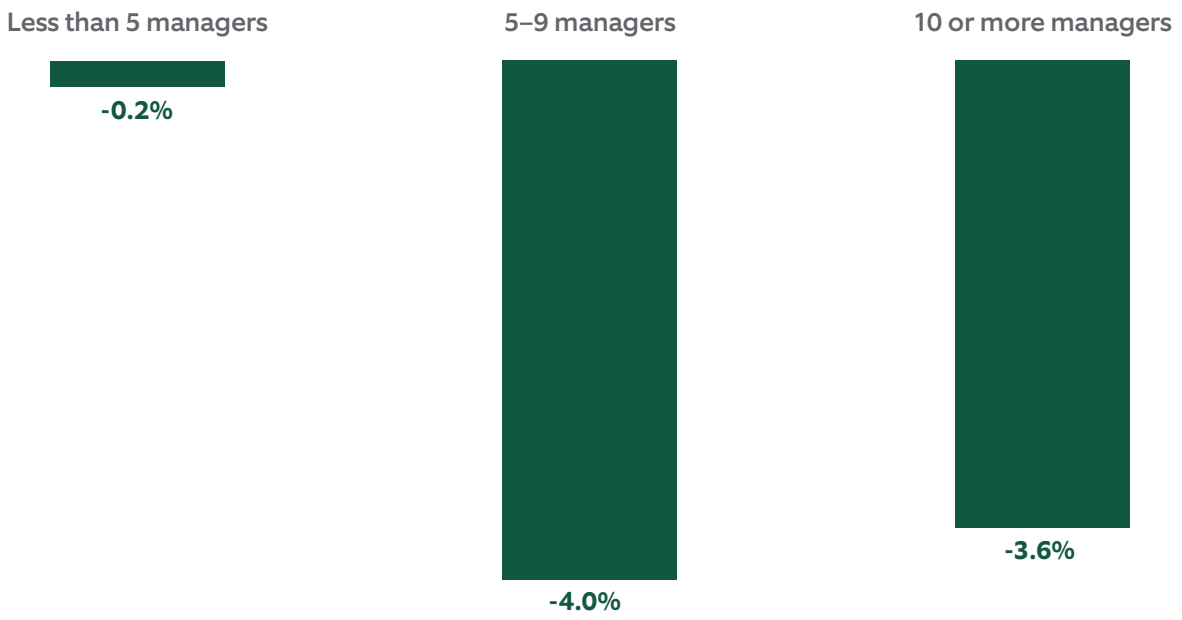
# ESG WAS HIGHLY SENSITIVE TO OVER-DIVERSIFICATION

Our research showed a material impact to the overall ESG score occurred as the number of underlying managers increased.

While adding underlying managers into the portfolio line-up can potentially reduce overall risk, it also showed a clear dilution effect on the ESG profile of the overall portfolio.

As the number of underlying managers in the aggregate portfolio increases, the overall ESG score of the portfolio tends to decrease. This was generally caused by the increased number of active managers with more concentrated positions, which tended to have low ESG scores on average.

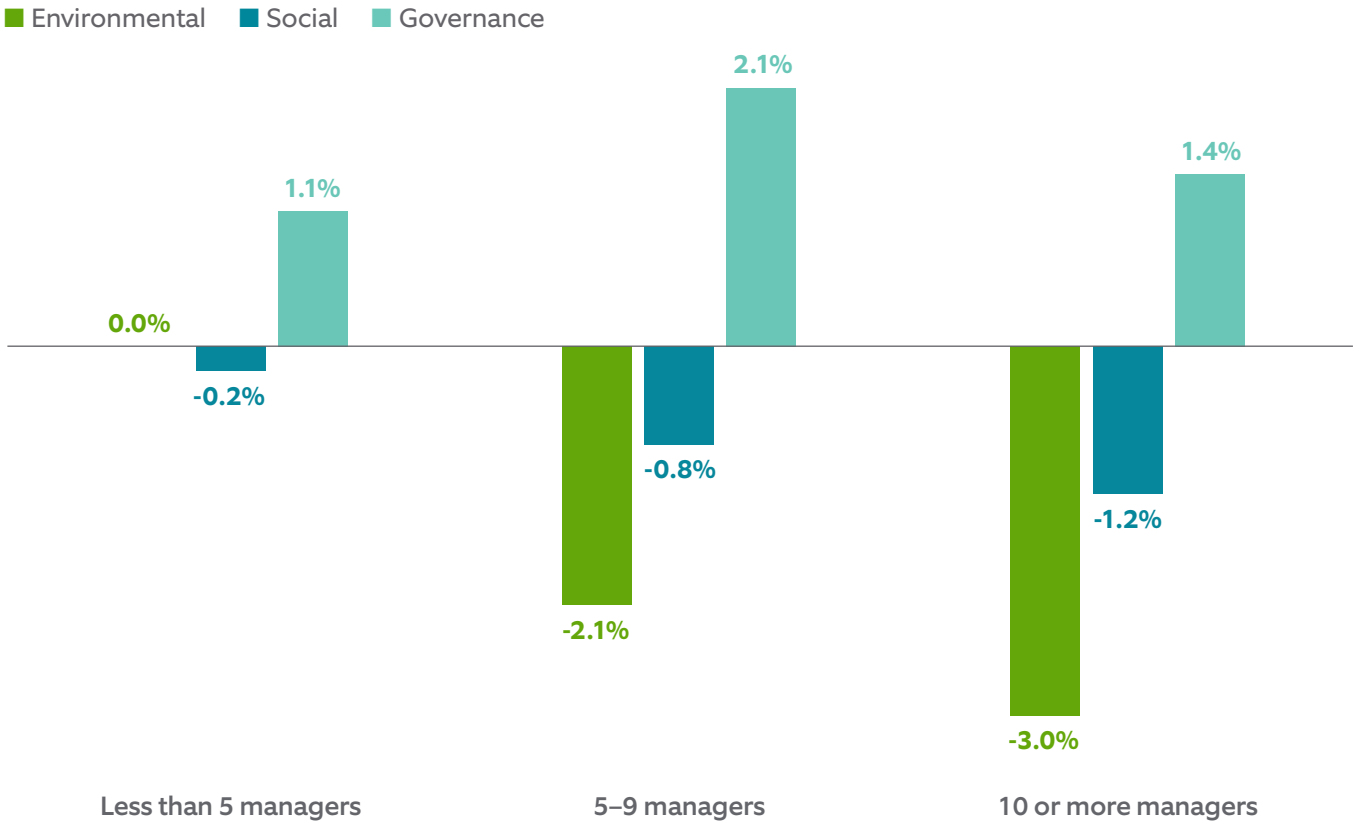
**AGGREGATE PORTFOLIO ESG SCORE VS. BENCHMARK (%)**




Source: Northern Trust Asset Management. Data as of December 31, 2021. The numbers represent the average % change in MSCI ESG IVA Rating Score vs. Benchmarks across manager buckets.

# GOVERNANCE HAS BEEN LEAST IMPACTED BY OVER-DIVERSIFICATION

**AGGREGATE PORTFOLIO E, S AND G SCORE VS. BENCHMARK (%)**




Our research showed that governance scores were least impacted by over-diversification. In contrast, environmental and social scores experienced a significant dilution when the number of underlying managers increased.

The consistent correlation between strong corporate governance standards and financial performance may have led most underlying managers to hold stocks with stronger governance metrics. This would result in the aggregate portfolio being less subject to dilution.

Source: Northern Trust Asset Management. Data as of December 31, 2021. The numbers represent the average % change in MSCI ESG IVA Rating Score vs. Benchmarks across manager buckets.

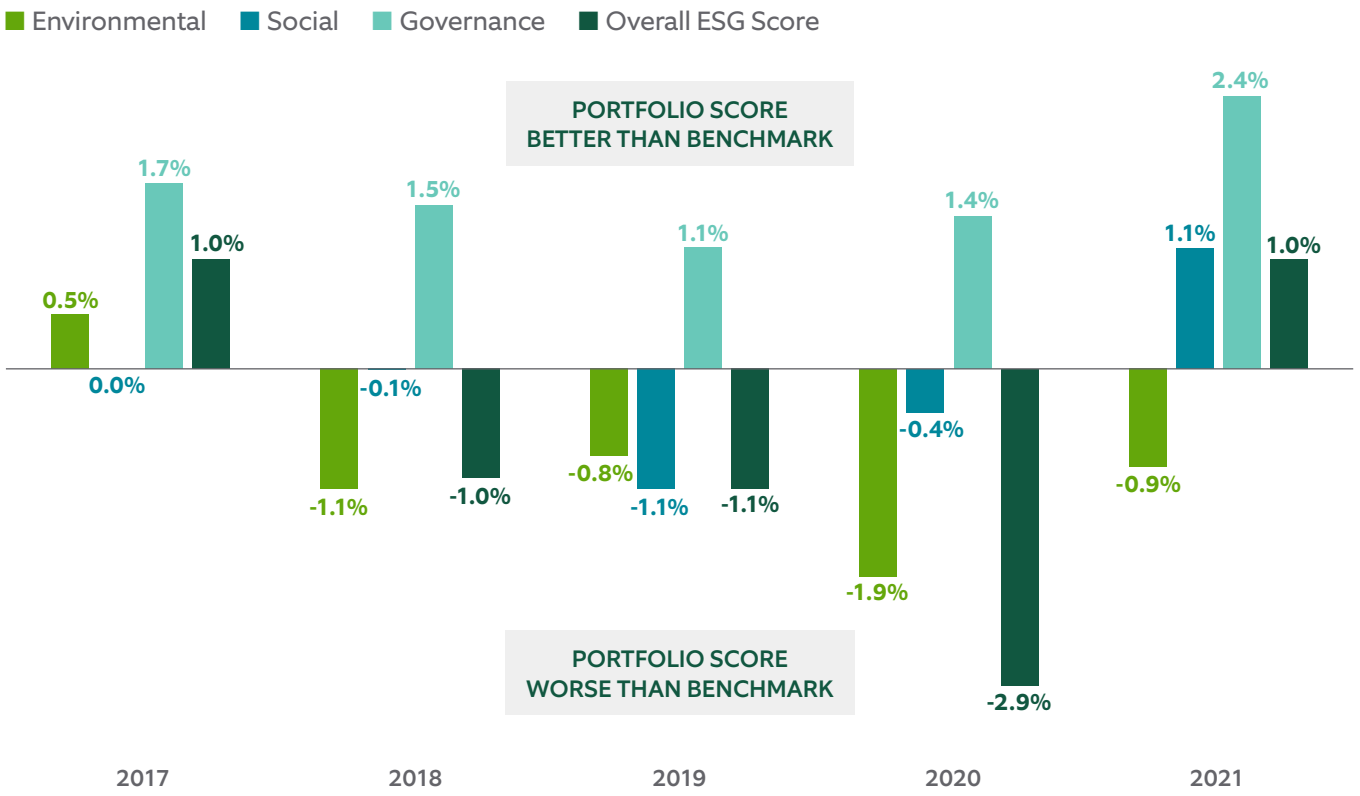
# BENCHMARKS OUTPACED INVESTORS ON ENVIRONMENTAL SCORES, BUT NOT GOVERNANCE

While institutional portfolios have not kept pace with the advancing environmental scores of market indices, there's been a significant rise in social and governance scores.

Portfolios' environmental scores fell between 2017 and 2020, and remained negative in 2021 despite investors' progress on carbon reduction (learn more on page 13). Investors focused on carbon reduction are generally surprised by this result, but it's quite common. This is driven by industry environmental ratings that are increasingly emphasizing additional themes such as natural capital (e.g. biodiversity) and pollution and waste (e.g. toxic emissions, packaging material).

Social scores saw large increases in 2020 and 2021, which likely reflects the growing awareness of social issues and the actions being taken by companies around the globe. Governance scores continue to outpace market indices, but the sizable increase in 2021 may mark an even higher investor focus going forward.

**AVERAGE PORTFOLIO ESG SCORES VS. BENCHMARK BY CALENDAR YEAR**

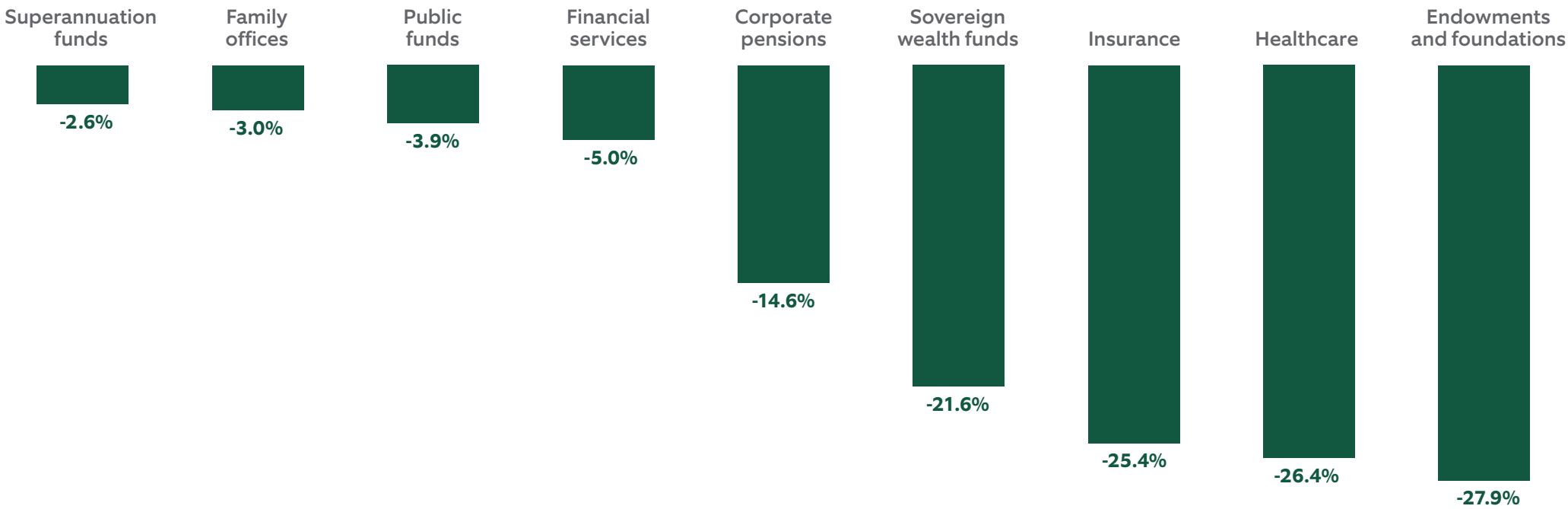



Source: Northern Trust Asset Management. Data as of December 31, 2021. Please see "Definitions and Methodology" on page 14 for more information about the benchmarks used for comparison.

# ALL INSTITUTIONS HAVE GAINED GROUND ON CARBON REDUCTION

Institutions have reduced the carbon exposure within their equity assets over the past six years. While some carbon reductions were minor, most were sizeable and likely intentional. These meaningful shifts have been persistent over this multi-year period and may mark a notable long-term shift in investor objectives.

## AVERAGE PORTFOLIO $CO_2$ INTENSITY VS. BENCHMARK




$CO_2$ intensity = Scope 1 and 2 carbon emissions in tons of $CO_2$/USD million sales.

Source: Northern Trust Asset Management. Data as of December 31, 2021. Please see "Definitions and Methodology" on page 14 for more information about the benchmarks used for comparison. Past performance is no guarantee of future results.

# DEFINITIONS AND METHODOLOGY

### How many portfolios were analyzed?

The analysis is based on the results of 280 Northern Trust Asset Management portfolio factor analyses (PFA) for 88 institutional investors. The regional breakdown based on investor location is: 71% North America/22% APAC/7% EMEA. Additional information on investor type can be found on page 2 of this report.

### Does the analysis only include ESG-oriented portfolios?

No, the portfolios analyzed had a range of targeted objectives and the majority of portfolios did not have specific ESG objectives. This enabled us to get an objective view on how various ESG-oriented issues were impacting various pools of assets.

### What ESG score is used in the analysis?

To ensure consistency and transparency, the ESG score used in our analysis is based on the MSCI ESG Intangible Value Assessment (IVA) Rating Score that measures corporate management, environmental and social risk factors for 5,500 companies globally.

### What is the definition of "higher-rated ESG portfolios"?

This classification is not based on whether the strategy has an explicit ESG mandate or not. The higher-rated ESG portfolios are determined by ranking all portfolios in the study by ESG score and grouping them into quintiles. The higher-rated portfolios fall into the top quintile.

### Why is "ESG risk" defined as stock-specific risk?

In a risk model context, investors can quantify the sector, country, currency and style (value, quality, size, etc.) exposures of the portfolio. What is left over is the "idiosyncratic" or "specific" risk — the residual risk — which is where ESG lies. This is because ESG is a stock level phenomenon.

### How is the ESG score of aggregated portfolios calculated?

When looking at aggregated portfolios, we apportion all underlying managers with the actual weights used in the investor portfolios (not equally weighted). The ESG score is then calculated at the stock level of the aggregated portfolio (it is not a weighted average of single managers).

### What are the benchmarks used for comparison?

The benchmarks referred to in the report were the actual benchmarks used by the investors we worked with. Benchmarks can range from ASX 100 to ACWI IMI or custom benchmarks, depending on the portfolios. Hence, the results are a broad comparison of portfolios against their benchmarks.

### What is the definition of active/passive managers?

The manager classification (active or passive) was not provided by the client. As a proxy, we classified the managers as active/passive based on the following definition: If the active risk of a manager relative to the respective broad market index exceeds 2.5%, then the manager would be considered "active."

# ABOUT NORTHERN TRUST ASSET MANAGEMENT

Northern Trust Asset Management is a global investment manager that helps investors navigate changing market environments, so they can confidently realize their long-term objectives.

Entrusted with nearly $1.0 trillion in assets,* we understand that investing ultimately serves a greater purpose. We believe investors should be compensated for the risks they take — in all market environments and any investment strategy. That's why we combine robust capital markets research, expert portfolio construction and comprehensive risk management to craft innovative and efficient solutions that deliver targeted investment outcomes.

As engaged contributors to our communities, we consider it a great privilege to serve our investors and our communities with integrity, respect and transparency.

*Assets under management were $999.1 billion as of September 30, 2022.

How useful is this content?

## SUSTAINABLE INVESTING

**30+ years managing socially responsible portfolios** for many of the world's most sophisticated and progressive investors.

**Demonstrated leadership:**

- Managing $122 billion of AUM[1] in sustainable strategies
- Best-performing U.S. asset manager — ShareAction "Voting Matters, 2021," published December 15, 2021. NTAM ranked 34th overall globally and first among U.S. asset managers[2]
- Founding signatory of Climate Action 100+
- 12 of 15 PRI Assessment Metrics at or Above Median (2021 PRI report published September 8, 2022)[3]
- TCFD supporter
- ISSB Investor Advisory Group member

[1] As of September 30, 2022.

[2] ShareAction ranked asset managers from IPE's 2021 top 500 asset managers based on the following criteria: largest 19 asset managers based on AUM, next largest 36 European asset managers based on AUM, next largest 10 U.K. asset managers based on AUM.

[3] For the full Northern Trust PRI Transparency Report, visit www.unpri.org. Assessment methodology can be found at https://www.unpri.org/reporting-and-assessment/how-investors-are-assessed-on-their-reporting/3066.article.

Above rankings are not indicative of future performance.

IMPORTANT INFORMATION

**About Sustainable Investing**

At Northern Trust Asset Management (NTAM), we define Sustainable Investing as encompassing all of NTAM's investment strategies and accounts that utilize values-based and norms-based screens, best-in-class and ESG integration, or thematic investing that may focus on a specific ESG issue such as climate risk. NTAM's Sustainable Investing includes portfolios designed by NTAM as well as those portfolios managed to client-defined methodologies or screens. As the data, analytical models and aforementioned portfolio construction tools available in the marketplace have evolved over time, so too has NTAM. NTAM's Sustainable Investing encompasses strategies and client assets managed in accordance with client-specified responsible investing terms (historically referred to as Socially Responsible), as well as portfolios that leverage contemporary approaches and datasets, including ESG analytics and ESG thematic investing.

NTAM may utilize an ESG framework in certain investment strategies. Considering ESG factors may result in reduced or increased exposure to certain companies or industries, which may cause the applicable strategy's performance to be lower than that of strategies that do not consider ESG factors. In addition, the added cost of ESG-related diligence in assessing the ESG parameters of an investment may also reduce the profitability of an applicable strategy's investments. There may also be different views of what it means for an issuer to have positive or negative ESG characteristics. There can be no guarantee that NTAM's determinations regarding an issuer's ESG characteristics will be accurate, including whether any such ESG characteristics are financially material or immaterial; any such inaccuracies could adversely affect a strategy's performance.

**About the Rankings and Awards**

ShareAction report "Voting Matters," December 2021. NTAM ranked 34th overall globally and 1st among U.S. asset managers. ShareAction ranked asset managers from IPE's 2021 top 500 asset managers based on the following criteria: largest 19 asset managers based on AUM, next largest 36 European asset managers based on AUM, next largest 10 UK asset managers based on AUM.

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All securities investing and trading activities risk the loss of capital. Each portfolio is subject to substantial risks including market risks, strategy risks, adviser risk and risks with respect to its investment in other structures. There can be no assurance that any portfolio investment objectives will be achieved, or that any investment will achieve profits or avoid incurring substantial losses. No investment strategy or risk management technique can guarantee returns or eliminate risk in any market environment. Risk controls and models do not promise any level of performance or guarantee against loss of principal. Any discussion of risk management is intended to describe Northern Trust's efforts to monitor and manage risk but does not imply low risk.

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If presented, hypothetical portfolio information provided does not represent results of an actual investment portfolio but reflects representative historical performance of the strategies, funds or accounts listed herein, which were selected with the benefit of hindsight. Hypothetical performance results do not reflect actual trading. No representation is being made that any portfolio will achieve a performance record similar to that shown. A hypothetical investment does not necessarily take into account the fees, risks, economic or market factors/conditions an investor might experience in actual trading. Hypothetical results may have under- or overcompensation for the impact, if any, of certain market factors such as lack of liquidity, economic or market factors/conditions. The investment returns of other clients may differ materially from the portfolio portrayed. There are numerous other factors related to the markets in general or to the implementation of any specific program that cannot be fully accounted for in the preparation of hypothetical performance results. The information is confidential and may not be duplicated in any form or disseminated without the prior consent of Northern Trust.

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