

MEASURING IMPACT: SDGS AS A DOUBLE MATERIALITY FRAMEWORK

USING UN SUSTAINABLE DEVELOPMENT GOALS TO ASSESS COMPANY-LEVEL IMPACT

At Northern Trust Asset Management (NTAM), we designed a materiality and data-driven framework to better align investment portfolios with the UN Sustainable Development Goals (SDGs). The NTAM SDG Framework builds on, and enhances, current best practice methodologies in the market. Additionally, our approach benefits from, and is complementary to, proprietary quantitative-based research and portfolio applications we developed to address climate and biodiversity risks in investment portfolios.¹ This paper provides an overview of the framework, with the following key takeaways:

1. Measuring portfolio and company impact using double materiality is a natural complement to traditional single materiality-based ESG ratings, allowing investors to better capture forward-looking opportunities.
2. The SDGs were designed with countries in mind rather than businesses, requiring adaptation in order to measure impacts on company performance and investment portfolios. Off-the-shelf solutions do not fully account for these discrepancies, potentially exposing investors to undervalued or hidden risks and/or mispricing of assets.
3. The NTAM SDG Framework utilizes a proprietary process and multiple data providers to produce a score we then use to identify companies supporting the SDG for potential inclusions in portfolios, as well as aid in the identification of companies detracting from the goals that can be targeted for engagement or exclusion.
4. Integration of impact considerations is possible into diversified equity portfolios while maintaining broader investment objectives.

NICHOLAS CHALMERS

Sustainable Investing Research Analyst

JAY EISENHARDT

Director of Sustainable Integration

IVAN RUMYNIN

Sustainable Investing Specialist

MILAN VIDOJEVIC, PH.D.

Head of Quantitative Equity Research

BART VAN VLIET, CFA

Quantitative Researcher

¹ See: Zymali, P., Dhall, A., Vidojevic, M., and J. Eisenhardt. [Carbon Misconceptions: Clarifying the Impact of a Net Zero Commitment on Equity Portfolios](#). The Journal of Impact and ESG Investing v6(2) Winter 2025. October 15, 2025; Dinershteyn, V., Rumynin, I., and M. Vidojevic. [Making Scope 3 Work: How Investors Can Navigate Complexity and Manage Climate Risk](#). Northern Trust Asset Management Sustainable Insights. March 2025; Dinershteyn, V., Gupta, A., and A. Gupta. [Nature in Portfolios: A Practical Framework for Investment Decision-Making](#). Northern Trust Asset Management Sustainable Insights. September 2026.

EVOLVING APPROACHES ON MATERIALITY

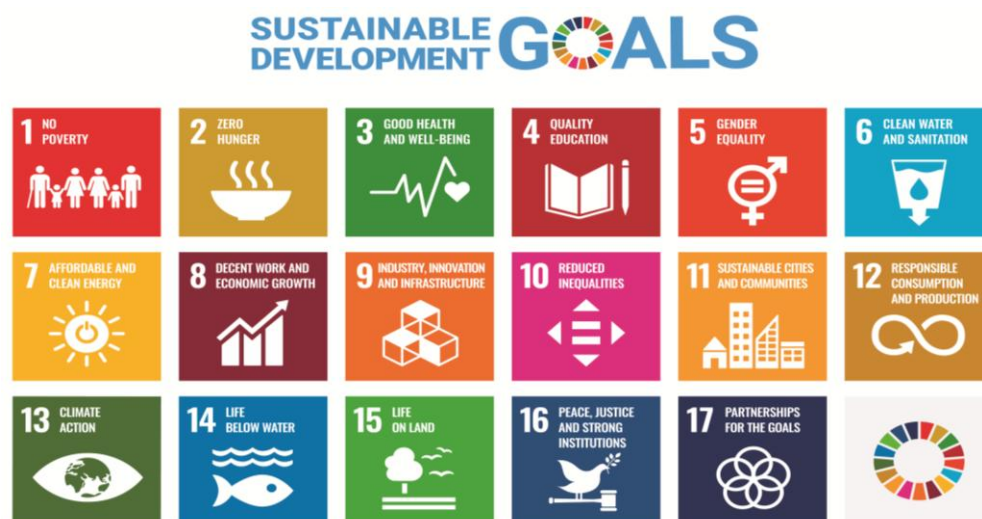
Traditional environmental, social and governance (ESG) metrics, particularly ratings, generally focus on risk management via single materiality;² we recommend evolving this approach by analyzing and scoring company impact via a broader double materiality lens. This recommendation is partly driven by regulation, notably the European Union's (EU) guidance on double materiality-based assessments of ESG risks and opportunities within the Corporate Sustainability Reporting Directive (CSRD).³ Our view is also driven by single materiality's overreliance on historical data, such as lagged corporate sustainability reporting and performance metrics based on previous years, creating a conundrum for investors by biasing investment decisions based on past events and performance. Just as investment decisions based solely on past results may not fully account for future risks and opportunities, sustainable investment decisions based on past data may lead to an inaccurate picture of portfolio sustainability. This leaves asset owners searching for mechanisms to better capture future or forward-looking opportunities tied to sustainable revenue growth. We believe a double materiality approach provides this alignment. To develop such a metric, a new materiality assessment is required that separates sustainability issues impacting a company's financials from where the company's operations are creating sustainability impacts. Whilst there are off-the-shelf solutions available for impact scores, the NTAM SDG Framework was developed based on our experience with clients in different markets, and in line with our risk-efficient approach to portfolio integration.

THE SDG-BASED FRAMEWORK

Whilst the 17 UN SDGs, shown in **Exhibit 1**, are designed and set goals at the country-level, the overall framework is broad enough to apply to companies and works well as a baseline for an impact assessment. Being generally known, easy to understand and covering the full range of sustainability topics is a further advantage. For a basic overview, see the callout box: **What Are SDGs**.

EXHIBIT 1: UN SDGS

17 UN Sustainable Development Goals



² Single materiality focuses on financial impacts on a company, while double materiality considers both financial impacts and the company's effects on society and the environment.

³ Source: European Commission. "Political agreement on Corporate Sustainability Reporting Directive will improve the way firms report sustainability information." Press Release. July 26, 2022.

What Are The SDGs?

The UN SDGs were created and adopted in 2015 as part of the 2030 Agenda for Sustainable Development. They expand on the previous Millennium Development Goals (MDGs), which only applied to developed countries and lacked clarity around how to achieve their lofty targets. Expanding to include developing countries, the SDGs integrate principles of equity and the concept of a “Just Transition”, as formally recognized in the 2015 Paris Agreement. The SDGs represent a balance to the decades-long tension between economic development and environmental/social sustainability, and are underpinned by clear, quantitative targets and indicators to be met before 2030

GAPS IN CURRENT SOLUTIONS

Before walking through our approach, we want to point out current gaps we see in a number of off-the-shelf solutions available to investors. Building work-arounds to address the impacts these gaps created in client portfolios led us to develop our proprietary approach.

In general, SDG alignment is assessed across two dimensions: products/services and process. Products/services measures the degree to which a company’s revenue streams align (or misalign) with the SDGs, and generally requires a proprietary taxonomy for assessments. Meanwhile, process measures the extent of alignment embedded in a company’s policies, programs, operations and practices, and can be supplemented by controversy research to shine a light on instances of particularly egregious misalignment that can manifest as headline risk. After several years of experience working with off-the-shelf solutions, we noted a number of areas requiring improvements:

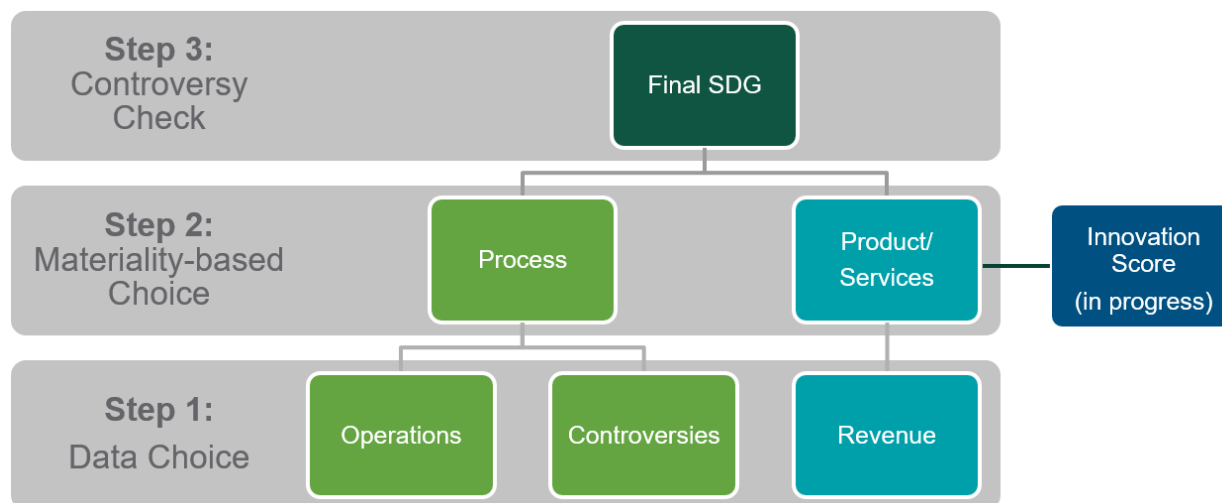
1. For products/services, available taxonomies are often ‘top-down’ industry estimates and the resulting measurements of company alignment can be detached from the underlying intentions of the SDGs. For example, renewable energy revenue is double counted across SDG 7 (Affordable and Clean Energy) and SDG 13 (Climate Action). Deeper analysis of SDG 13 reveals the targets are more appropriate/achievable for countries versus companies, largely due to goals exceeding simple mitigation efforts and encompassing larger scale climate adaption, resilience and capacity building that are not likely achievable at the company level. Thus, simply investing in renewables to achieve SDG 13 targets is a weaker form of alignment than for SDG 7, which can be misrepresented in portfolios.
2. In most cases, a company is inherently more likely to be able to contribute to each SDG *either* through its products/services or process, again raising the question of materiality. For example, an electric vehicle manufacturer or an energy company both contribute to climate-related SDGs more through their products than process (although, this remains also material). In contrast, most companies contribute to SDG 5 (Gender Equality) solely through process given the limited number of products aligned with this goal. A simplistic aggregation methodology would not capture these nuances, so we identified an opportunity to conduct detailed ‘bottom-up’ materiality analysis by sector and SDG combination.
3. Whilst aggregating a single total company score across all SDGs is overly simplistic, we nevertheless acknowledge that this is a potential use case. In this instance, an aggregation should also be based on sector-SDG materiality rather than a more simplistic averaging approach.

NTAM SOLUTION

Acknowledging some of the limitations presented in the previous section, we created the NTAM SDG Framework, building on the previous work by SDG data providers. The overall methodological schematic is summarized in **Exhibit 2**, with data sourced from multiple providers.

EXHIBIT 2: NTAM SDG FRAMEWORK, STEP-BY-STEP

Utilizing an aggregation approach across impact areas



Source: Northern Trust Asset Management

Starting at the bottom, **Step 1** sources and incorporates views from multiple data providers in order to overcome the generally unfocused nature of SDG data. A preferred provider is selected for Operations and Controversies, and another is selected for Revenue. Data gaps from one provider are filled in from another where appropriate and necessary.

Next, in **Step 2**, we examine SDG materiality alignment via an industry-level analysis across the 17 SDGs utilizing the Sustainability Accounting Standards Board (SASB) Sustainable Industry Classification System (SICS), selected due to its classification of sectors using sustainability related risks and opportunities. We then construct a materiality taxonomy that examines each SICS industry using both underlying data and individual targets and indicators for each of the 17 SDGs, resulting in an industry-level SDG materiality mapping. Our underlying thesis is to avoid attributing a positive or negative assessment to a company where the underlying SDG targets are not material. This approach avoids noise in the portfolio construction process, allowing analysts to focus on material considerations with potential to impact future cash flows.

As a result, for each industry-SDG pairing the outcome of the mapping can be one of four options: products/services; process; or in a small number of cases, both or neither. For example, our materiality mapping finds no material revenues when examining Metals and Mining impacts on SDG 15 (Life on Land). However, Metals and Mining operations have the potential to negatively impact forests, wetlands, mountains, drylands, and freshwater ecosystems, which runs contrary to SDG 15 targets. Thus, process rather than products/services is deemed material, and the assessment is based on factors such as land remediation, community relations, and preventative management. This is then combined with an SDG specific controversy score which acts as a penalty.

Step 3 applies a final SDG level controversy assessment, with a threshold for severe controversies that triggers a downgrade in the overall score. This last component of the scoring framework does not rely on the industry level taxonomy, but rather is applied to all industries to adjust the final score when appropriate. For example, SDG 15 is not material for the Hotels and Lodging industry, but an individual company may experience a severe controversy related to wetlands during construction of a new facility. Taking a conservative approach, we would assign the controversy score (negative) to the company, rather than the expected null score based on materiality. This ensures idiosyncratic risks are accounted for and not missed at the margin.

Once each component is calculated, we have a view (or score) of each company, across the material SDGs. This score can be used to identify companies supporting the SDG for potential inclusions in portfolios, as well as aid in the identification of companies detracting from the goals that can be targeted for engagement or exclusion. **Exhibit 3** shows some anonymized examples of companies and their corresponding SDG scores, with differences between the NTAM SDG Framework and off-the-shelf approaches highlighted.

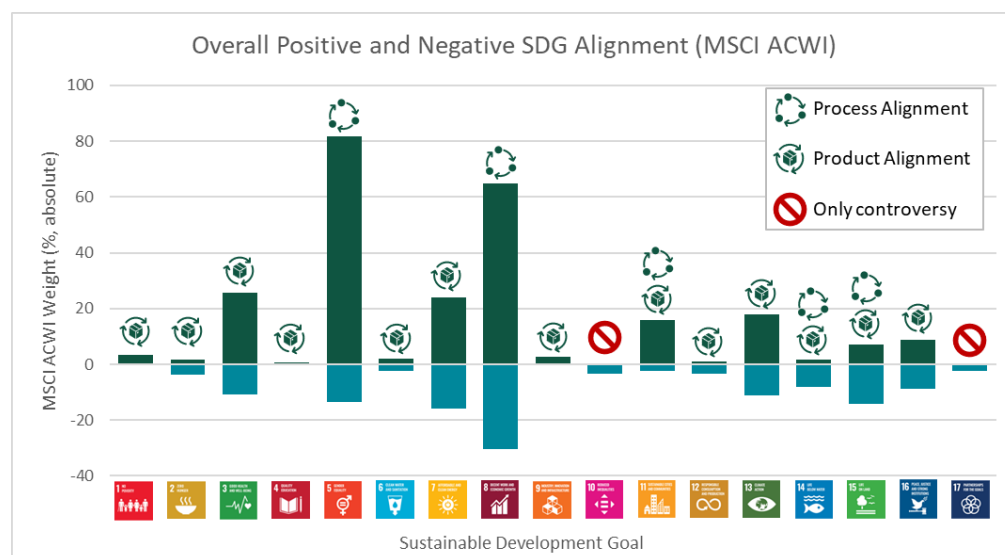
EXHIBIT 3: COMPARING NTAM SDG FRAMEWORK VS OFF-THE-SHELF APPROACHES

Company	SICS Industry	SDG	NTAM Score	Off-the-shelf Score	Comment
APAC Hospital Operator	Health Care Delivery		Neutral	Very strong positive alignment	Privatized hospitals not counted as being materially aligned with SDG 3 under NTAM framework
European Renewables Company	Wind Technology & Project Developers		Medium positive alignment	Very strong positive alignment	Looser mitigation focus of SDG 13 leads to weaker alignment for renewables (though generally equal for SDG 7)
APAC Sporting Goods Company	Toys & Sporting Goods		Strong positive alignment	Neutral	Under NTAM's framework, company's Products deemed to be notably more material than processes (i.e., production of bicycles)
European Utilities Company	Electric Utilities & Power Generators		Neutral	Medium positive alignment	Under NTAM's framework, Product is deemed more material than process, so company scores lower based on low percentage of renewables on its grid.
US Managed Health Care	Managed Care		Not material	Very strong positive alignment	Under NTAM's framework, SDG 10 is often uninvestable and is considered non-material for the sector.

Source: Northern Trust Asset Management. Data as of April 2026.

Exhibit 4 shows the total weight of companies in the MSCI ACWI Index with either positive or negative alignment to each SDG. The negative part of the y-axis should be read as an absolute percentage, and the magnitude of alignment is not considered. The symbols show whether the alignment derives from process/services, product, both or neither.

EXHIBIT 4: NTAM SDG FRAMEWORK COMPANY ALIGNMENT (MSCI ACWI INDEX)



Source: Northern Trust Asset Management, MSCI. Data as of April 2026.

As expected, most companies in the MSCI ACWI Index contribute to SDGs 5 (Gender Equality) and 8 (Decent Work and Economic Growth), though this is largely through hiring and employment practices and therefore captured through process alignment. On the other hand, certain goals like SDG 1 (No Poverty), 4 (Quality Education), 6 (Clean Water and Sanitation), 9 (Industry, Innovation and Infrastructure) and 12 (Responsible Consumption and Production) are only material within a product context, with only a small number of companies able to contribute to the respective goals. Meanwhile, SDGs 10 (Reduced Inequalities) and 17 (Partnerships for the Goals) are not material from either a process/services or product alignment perspective, but a small number of companies nevertheless score negatively on these through involvement with related controversies.

PORTFOLIO USE CASES

Current and proposed future portfolios utilizing the NTAM SDG Framework are summarized in **Exhibit 5**. The underlying SDG scores can be applied to both equities and fixed income, and can be used in a fully passive solution (e.g., a custom index) or in an active portfolio in combination with traditional and alternative factors.

EXHIBIT 5: PORTFOLIO INTEGRATION USE CASES

Portfolio	Description	Outcome
Example 1: Bespoke client solution	- Proposed bespoke solution for institutional client, covering thematic priorities of climate, biodiversity and sustainable food and health. - MSCI World Index benchmark. - Full solution included negative screens and an optimized approach, with NTAM SDG score uplifts included as part of the utility function alongside other sustainability targets, traditional and alternative factors. - Alternative factors include NTAM's proprietary Long-Term Stakeholder Value suite of signals.⁴ - SDG basket covered the below goals: 	- Three versions, with consistent use of SDGs and varying levels of traditional factor exposure. - First two solutions have expected tracking error of 75–100bps, and third solution with highest factor exposure has 75–120bps. - Notable uplifts achieved on SDGs 7, 13 and 3. SDGs 2, 14 and 15 are negative at benchmark level (see Exhibit 4), so portfolio reduced the scale of negative alignment.
Example 2: NTAM Nature Framework	- NTAM's proprietary Nature Framework, a practical decision-support framework structured around three pillars: Impact on Nature, Risk and Dependencies, and Contribution. - Optimized approach that includes SDG uplifts based on the below goals as part of the 'Contribution' pillar. 	- Overall framework has tracking error of c.60bps when applied to MSCI World and 50bps when applied to MSCI Emerging Markets. - All SDGs used skew negative, so focus is on increasing the weight of companies with positive alignment.

Source: Northern Trust Asset Management. Data as of April 2026 for Example 1, and July 2026 for Example 2.

CONCLUSION AND FUTURE ENHANCEMENTS

To conclude, SDGs are a useful heuristic framework to analyze company impact through a double materiality lens. However, they are designed with countries in mind rather than businesses, and must be adapted while acknowledging the inherent limitations. Put simply: sometimes company actions cannot contribute to an SDG. Off-the-shelf SDG solutions fall short on several parameters, which we endeavored to correct for with this solution. We designed the NTAM SDG Framework to be a flexible, forward-thinking approach to impact considerations and with implementation potential across a range of portfolio contexts.

As with any methodology, the intention is not to remain static. The framework incorporates an annual review process led by our Sustainable Investing team with input from investment partners to continually enhance and innovate the approach over time, thus ensuring consistent relevance for investors. The next natural enhancement for the framework, being worked on during our 2026 review cycle, is to supplement current revenue-based alignment for products/services with patent information (via an innovation score). This evolution will capture potential future-revenue alignment and monetization of SDG-related opportunities, and is a continuation of our work with patent information as introduced in our Long-Term Stakeholder Value suite of signals. For example, if a wind turbine company with an innovative patent portfolio is deriving 50% of revenue aligned with SDG 7, the 50% revenue (used to calculate the product score in Step 2 of Exhibit 2) can be adjusted upwards with expectations of these patents monetizing in the future. Technological tipping points are crucial to sustainable development and a just/economically viable transition.

⁴ See: De Lange, G., Smit, M., and E. Geczko. [Long-Term Stakeholder Value \(LTSV\): Identifying Companies that Create Long-Term Value for all Stakeholders](#)

IMPORTANT INFORMATION

For Asia-Pacific (APAC) and Europe, Middle East and Africa (EMEA) markets, this information is directed to institutional, professional and wholesale clients or investors only and should not be relied upon by retail clients or investors.

This document may not be edited, altered, revised, paraphrased, or otherwise modified without the prior written permission of Northern Trust Asset Management (NTAM). The information contained herein is intended for use with current or prospective clients of Northern Trust Asset Management. The information is not intended for distribution or use by any person in any jurisdiction where such distribution would be contrary to local law or regulation. Northern Trust Asset Management's (NTAM) and its affiliates may have positions in and may effect transactions in the markets, contracts and related investments different than described in this information. This information is obtained from sources believed to be reliable, its accuracy and completeness are not guaranteed, and is subject to change. Information does not constitute a recommendation of any investment strategy, is not intended as investment advice and does not take into account all the circumstances of each investor.

This report is provided for informational purposes only and is not intended to be, and should not be construed as, an offer, solicitation or recommendation with respect to any transaction and should not be treated as legal advice, investment advice or tax advice. Recipients should not rely upon this information as a substitute for obtaining specific legal or tax advice from their own professional legal or tax advisors. References to specific securities and their issuers are for illustrative purposes only and are not intended and should not be interpreted as recommendations to purchase or sell such securities. Indices and trademarks are the property of their respective owners. Information is subject to change based on market or other conditions.

All securities investing and trading activities risk the loss of capital. Each portfolio is subject to substantial risks including market risks, strategy risks, advisor 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 NTAM's efforts to monitor and manage risk but does not imply low risk.

Past performance is not a guarantee of future results. Performance returns and the principal value of an investment will fluctuate. Performance returns contained herein are subject to revision by NTAM. Comparative indices shown are provided as an indication of the performance of a particular segment of the capital markets and/or alternative strategies in general. Index performance returns do not reflect any management fees, transaction costs or expenses. It is not possible to invest directly in any index. Net performance returns are reduced by investment management fees and other expenses relating to the management of the account. Gross performance returns contained herein include reinvestment of dividends and other earnings, transaction costs, and all fees and expenses other than investment management fees, unless indicated otherwise.

Forward-looking statements and assumptions are NTAM's current estimates or expectations of future events or future results based upon proprietary research and should not be construed as an estimate or promise of results that a portfolio may achieve. Actual results could differ materially from the results indicated by this information.

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 over-compensation 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 NTAM.

Investing involves risk- no investment strategy or risk management technique can guarantee returns or eliminate risk in any market environment.

Northern Trust Asset Management is composed of Northern Trust Investments, Inc., Northern Trust Global Investments Limited, Northern Trust Fund Managers (Ireland) Limited, Northern Trust Global Investments Japan, K.K., NT Global Advisors, Inc., 50 South Capital Advisors, LLC, Northern Trust Asset Management Australia Pty Ltd, and investment personnel of The Northern Trust Company, The Northern Trust Company (Singapore Branch), and The Northern Trust Company of Hong Kong Limited.

Issued in the United Kingdom by Northern Trust Global Investments Limited, regulated by the Financial Conduct Authority (License Number 191916); issued in the European Economic Area (EEA) by Northern Trust Fund Managers (Ireland) Limited, regulated by the Central Bank of Ireland (License Number C21810); issued in Australia by Northern Trust Asset Management (Australia) Limited (ACN 648 476 019), which holds an Australian Financial Services Licence (License Number 529895) and is regulated by the Australian Securities and Investments Commission (ASIC); issued in Hong Kong by The Northern Trust Company of Hong Kong Limited, which is regulated by the Hong Kong Securities and Futures Commission; and issued in Singapore by The Northern Trust Company (Singapore Branch), which is regulated by the Monetary Authority of Singapore.

© 2026 Northern Trust Corporation. Head Office: 50 South La Salle Street, Chicago, Illinois 60603 U.S.A.