

## INDEX METHODOLOGY

### INTRODUCTION

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This document sets forth the methodology for the Northern Trust ESG & Climate Emerging Markets Core Index.

The Index is calculated and disseminated by Refinitiv<sup>i</sup>, and had an inception date of July 30, 2021 at a base index value of 1000.

### OVERVIEW

#### *Northern Trust ESG & Climate Emerging Markets Core Index*

The Northern Trust ESG & Climate Emerging Markets Core Index is designed to construct a universe of large and mid-capitalization companies, from Emerging Market countries, that possess environmental, social, and governance (ESG) characteristics.

### ELIGIBLE SECURITIES

In order to be eligible for inclusion in the Northern Trust ESG & Climate Emerging Markets Core Index, a security must be a constituent of the Northern Trust Emerging Markets Large Cap Index<sup>ii</sup> (the “Eligible Universe”).

In addition, at each reconstitution date, securities are excluded from the index based on ESG screens<sup>iii</sup> managed by Northern Trust<sup>iv</sup>.

### DETAILED METHODOLOGY

The construction of the Index begins with a universe of eligible securities (defined in “Eligible Securities”). All remaining eligible securities are then optimized based on their exposure to quantitative factors such as:

- ESG Vector Score<sup>v</sup>, as defined by Northern Trust Investment’s proprietary model
- Institutional Shareholder Services ESG<sup>vi</sup> data: Carbon Risk Rating, Carbon Intensity, and Carbon Reserves

The main objective of the optimization is to minimize our variance to the Eligible Universe and target certain ESG characteristics, all while minimizing the overall risk of the index relative to its Eligible Universe as measured by standard risk models. Systematic risk is managed during the optimization utilizing several constraints, with the optimization’s hard constraints found below (bounds shown as relative weightings to the Eligible Universe unless noted otherwise):



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- Constituent constraint<sup>vii</sup> : to limit a constituents maximum and minimum active weight relative to the Eligible Universe to -1.00% to +0.75%
- Minimum absolute constituent weight of 0.02%
- Liquidity<sup>viii</sup> constraint: to limit a constituent's maximum weight in the Index to its weight in the Eligible Universe, when the constituent's liquidity score in the Eligible Universe falls in the bottom decile
- Sector constraint: +/-1.00%
- Industry constraint: +/-3.00%
- Region constraint: +/-1.00%
- Region Sector constraint: +/-1.50%
- Country constraint: +/-3.00%
- Turnover constraint: to limit the maximum turnover to approximately 15% on any reconstitution date

All of the systematic risk constraints are placed in the constraint hierarchy so when a solution is not feasible due to hard constraints, a relaxed solution can be found.

Any changes to this methodology will be announced to the public at least sixty (60) days in advance prior to becoming effective.

## REBALANCING AND RECONSTITUTION

The Northern Trust ESG & Climate Emerging Markets Core Index is reconstituted quarterly and adjusted intra-period only in connection with errors, securities' eligibility, exchange connectivity, float changes and corporate actions, including, but not limited to, initial public offerings and spin-offs.

The index is reconstituted in February, May, August, and November on the last business day of the month in which the U.S. equity markets are open for a full day of trading<sup>ix</sup>, and becomes effective immediately after the close. The Northern Trust ESG & Climate Emerging Markets Core Index reserves the right to postpone each reconstitution date for up to one week with prior client notification of such a postponement.

All changes to constituents and weightings will be announced to the public at least two (2) days prior to reconstitution or rebalancing and with definitive weights after the close of the reconstitution or rebalancing date before the following day's market opening.

## INDEX MAINTENANCE / CORPORATE ACTION-DRIVEN CHANGES

The Index will adopt all corporate action related policies and procedures used by Refinitiv. A complete list of Refinitiv's methodology is available by request at [NT\\_Index\\_Services@ntrs.com](mailto:NT_Index_Services@ntrs.com)

Disclaimer: *Returns of the indexes do not typically reflect the deduction of investment management fees, trading costs or other expenses. It is not possible to invest directly in an index. Indexes are the property of their respective owners, all rights reserved.*

<sup>i</sup> Refinitiv is a subsidiary of The London Stock Exchange Group.

<sup>ii</sup> The Northern Trust Emerging Markets Large Cap Index is a sub-index of the Northern Trust Global Index. The sub-index is formed by selecting all of the securities from the Northern Trust Global Index that are assigned to Emerging Markets countries, and are large-mid capitalization, per Northern Trust's proprietary methodology. For additional details on this methodology, please feel free to reach out to [nt\\_index\\_services@ntrs.com](mailto:nt_index_services@ntrs.com).

<sup>iii</sup> Powered by Sustainalytics©. Sustainalytics is a leading independent ESG and corporate governance research, ratings and analytics firm that supports investors around the world with the development and implementation of responsible investment strategies.

<sup>iv</sup> The Northern Trust ESG team produces an exclusion list that is constructed by using ESG analytical data to explicitly exclude companies with controversial business involvement or behavior. The screen consists of four categories of controversy or business involvement flags – Global Norms, Tobacco Business Involvement, Weaponry Business Involvement and Thermal Coal Business Involvement. Examples of excluded securities from screens used in our process includes, but is not limited to removal of: companies that are non-compliant with the UN Global Compact or have experienced severe customer controversies; tobacco producers along with companies that receive significant revenue from retail or distribution of tobacco; companies with any tie to controversial weapons; companies that receive significant revenue from the production, retail and distribution of civilian weapons.

<sup>v</sup> The Northern Trust ESG Vector Score is designed to rank companies based on their management of and exposure to material ESG metrics. The Score was designed to align with the Sustainability Accounting Standards Board (SASB) Standards. The SASB Standards were designed for investors, and focus on only financially material issues based on the industry in which the company operates. Based on that structure, the ESG Vector Score is a combination of individual ESG indicators, adjusted for industry membership. Our optimization seeks to improve the ESG Vector Score of the Index, relative to the Eligible Universe.

<sup>vi</sup> ISS ESG solutions enable investors to develop and integrate responsible investing policies and practices, engage on responsible investment issues, and monitor portfolio company practices through screening solutions. It also provides climate data, analytics, and advisory services to help financial market participants understand, measure, and act on climate-related risks across all asset classes. Our optimization seeks to improve the Carbon Risk Rating and reduce the Carbon Intensity and Carbon Reserves of the Index, relative to the Eligible Universe.

<sup>vii</sup> This constraint does not apply to securities categorized as ineligible due to our ESG screens. Those securities are ineligible to be selected as constituents in the Index.

<sup>viii</sup> Liquidity of an asset measures the extent to which that asset can be bought or sold in the market without impacting the price of the asset. Examples of some commonly used liquidity measures include but are not limited to: Share Turnover (number of shares traded divided by the total number of shares outstanding), Average Daily Volume (number of shares traded divided by a period of time), and Bid-Ask Spread (the difference or spread between the price a buyer is willing to pay for an asset, and the price a seller is willing to accept for an asset).

<sup>ix</sup> Per the holiday calendar located at [nyse.com](http://nyse.com)

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