

INDEX METHODOLOGY

INTRODUCTION

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This document sets forth the methodology for the Northern Trust Emerging Markets Quality Low Volatility Index.

The Index is currently calculated and disseminated by Refinitivⁱ.

OVERVIEW

Northern Trust Emerging Markets Quality Low Volatility Index

The Northern Trust Emerging Markets Quality Low Volatility Index is designed to construct a high quality universe of companies that possess lower overall absolute volatility (i.e. risk) relative to an eligible emerging market universe. An emphasis is placed on a company's income and capital growth, while also reducing overall volatility of returns relative to an eligible universe of emerging market securities. The proprietary Northern Trust quality factor is used to identify companies that exhibit strength in profitability, management expertise and cash flow.

ELIGIBLE SECURITIES

In order to be eligible for inclusion in the Northern Trust Emerging Markets Quality Low Volatility Index, a security must be a constituent of the Northern Trust Global Index, be domiciled in an emerging market country (see list below) and also designated as a *Large/Mid cap*ⁱⁱ company per Northern Trust's market capitalization classification.

Emerging Countries	Tax Advantaged Countries
Brazil	Anguilla
Chile	Antigua
China ⁱⁱⁱ	Antilles
Colombia	Barbuda
Czech Republic	Bahamas
Egypt	Barbados
Hungary	Belize
India	Bermuda
Indonesia	British Virgin Islands
South Korea	Cayman Islands
Malaysia	Channel Islands
Mexico	Cook Islands
Morocco	Falkland Islands



NORTHERN TRUST EMERGING MARKETS QUALITY LOW VOLATILITY INDEX

Peru		Faroe Islands
Philippines		Gibraltar
Poland		Isle of Man
Russia		Liberia
South Africa		Liechtenstein
Taiwan		Luxembourg
Thailand		Marshall Islands
Turkey		Suriname
		Turks and Caicos Islands

This eligible universe will be considered the benchmark herein.

In addition to the criteria above, securities ranking in the lowest quintile of quality^{iv} based on our proprietary scoring model are ineligible for inclusion in the index and are removed prior to optimization.

DETAILED METHODOLOGY

The construction of the Index begins with a universe of eligible securities (defined in “Eligible Securities”). All eligible securities are then re-weighted by their float adjusted market capitalizations, and optimized to achieve a reduction in volatility, as well as a quality tilt within the index relative to the benchmark.

In addition to this main objective, systematic risk is managed during the optimization utilizing several constraints. These constraints are found below (bounds shown as relative weightings to the benchmark unless otherwise noted):

- Security level constraint (+/- 5%) with a minimum absolute weight of 0.02%
- Liquidity^v constraint: to limit a constituent’s maximum weight in the index to its weight in the benchmark, when the constituent’s liquidity score in the benchmark falls in the bottom decile
- Sector (+/- 5%), Industry (+/- 6%), country (+/- 4 %), and style factor neutrality (excluding volatility)
- Historical Beta (0.65x)^{vi}
- Turnover constraint (to limit the maximum turnover to approximately 12% on any rebalance 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 clients at least sixty (60) days in advance prior to becoming effective.

REBALANCING AND RECONSTITUTION

The Northern Trust Emerging Markets Quality Low Volatility 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^{vii}, and becomes effective immediately after the close. The Northern Trust Emerging Markets Quality Low Volatility 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 clients 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.

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.*

ⁱ Refinitiv is a wholly owned subsidiary of Thomson Reuters Benchmark Service Limited
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ⁱⁱ Large/Mid cap, as stated in the Northern Trust Global Index methodology document.

ⁱⁱⁱ With regards to China, only shares of companies incorporated in mainland China that are listed on the Hong Kong Exchange or trading globally as a depository receipt, are eligible for inclusion. In addition to this criteria, the depository receipts are screened further to insure that each company is only represented once within the index – through the ordinary share listing in Hong Kong, or the depository receipt listing.

^{iv} This factor seeks to identify companies that exhibit stable returns relative to the market, a characteristic which we define as quality.



^v 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).

^{vi} Beta is the coefficient term of the regression of a security versus the market, and is also a measure of the systematic, non-diversifiable risk of a security or portfolio. Beta represents the market sensitivity, relative to a given market index and time period. For example, a security exhibiting a beta of 1.0 indicates that the security has the same sensitivity as the market index it is being compared to, while a security with a beta of 1.5 would indicate that the security has 1.5 times the sensitivity of the market index.

^{vii} Per the holiday calendar located at nyse.com

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