

MSCI World Custom ESG Minimum Volatility (EUR) Index* Methodology

* a custom index calculated by MSCI based on ESG criteria selected by Northern Trust

August 2019



Introduction 3 **Contents** 1 Constructing the MSCI World Custom Minimum Volatility 2 Applying the MSCI World Custom ESG Index Methodology4 Applying the MSCI Global Minimum Volatility Indexes Methodology......4 Maintaining the MSCI World Custom ESG Minimum Volatility (EUR) Index 5 Semi-Annual Index Reviews......5 3.1 3.2 Quarterly Index Reviews5 3.3 Ongoing Event-Related Changes5



1 Introduction

The MSCI World Custom ESG Minimum Volatility (EUR) Index (the "Index") is a custom index that aims to achieve total risk minimization. The MSCI Global Minimum Volatility Indexes methodology is applied on the MSCI World Custom ESG Index, which is a custom index based on the MSCI World Index. The Index includes constituents which do not violate the customized ESG screening criteria¹ selected by Northern Trust.

 $^{^{\}rm 1}$ For further details on the ESG Criteria, please refer to the MSCI World Custom ESG Index Methodology at $\underline{{\bf www.msci.com/index-methodology}}$



2 Constructing the MSCI World Custom Minimum Volatility (EUR) Index

The MSCI World Custom ESG Minimum Volatility (EUR) Index is constructed from the MSCI World Index (the "Parent Index"). The following steps are applied at initial construction of the Index.

- Applying the MSCI World Custom ESG Index methodology
- Applying the MSCI Global Minimum Volatility Indexes methodology

2.1 APPLYING THE MSCI WORLD CUSTOM ESG INDEX METHODOLOGY

The MSCI World Custom ESG Index methodology is applied on the Parent Index.

For more information on the MSCI World Custom ESG Index methodology, please refer to https://www.msci.com/index-methodology

2.2 APPLYING THE MSCI GLOBAL MINIMUM VOLATILITY INDEXES METHODOLOGY

The MSCI Global Minimum Volatility Indexes methodology is applied on the resulting set of constituents.

The optimization currency is EUR.

For more information on the MSCI Global Minimum Volatility Indexes methodology, please refer to https://www.msci.com/index-methodology.



3 Maintaining the MSCI World Custom ESG Minimum Volatility (EUR) Index

3.1 SEMI-ANNUAL INDEX REVIEWS

The Index is reviewed on a semi-annual basis coinciding with the May and November Semi-Annual Index Reviews of the MSCI Global Investable Market Indexes. The proforma Index is typically announced nine business days before the Index Review effective date.

At each Semi-Annual Index Review, the index is rebalanced by applying the following steps sequentially

- In the first step, the MSCI World Custom ESG Index methodology is applied on the Parent Index
- The MSCI Global Minimum Volatility Indexes methodology is applied on the resulting set of constituents in the first step

3.2 QUARTERLY INDEX REVIEWS

Coinciding with the February and August Quarterly Index Reviews of the MSCI Global Investable Market Indexes, current Index constituents that do not pass the customized ESG screening criteria selected by Northern Trust as per the application of the MSCI World Custom ESG Index methodology are deleted from the Index.

Potential additions from the application of the customized ESG screening criteria selected by Northern Trust on the Parent Index at the Quarterly Index Review are not included in the Index and are considered for inclusion only at the Semi-Annual Index Reviews.

The pro forma Index is typically announced nine business days before the Index Review effective date.

3.3 ONGOING EVENT-RELATED CHANGES

The general treatment of corporate events in the MSCI World Custom ESG Minimum Volatility Index aims to minimize turnover outside of Index Reviews. The methodology aims to appropriately represent an investor's participation in an event based on relevant deal terms and pre-event weighting of the index constituents that are involved. Further, changes in index market capitalization that occur as a result of corporate event implementation will be offset by a corresponding change in the Variable Weighting Factor (VWF) of the constituent.



Additionally, if the frequency of Index Reviews in the Parent Index is greater than the frequency of Index Reviews in the MSCI Minimum Volatility Index, the changes made to the Parent Index during intermediate Index Reviews will be neutralized in the MSCI World Custom ESG Minimum Volatility Index.

The following section briefly describes the treatment of common corporate events within the MSCI World Custom ESG Minimum Volatility Index.

No new securities will be added (except where noted below) to the Index between Index Reviews. Parent Index deletions will be reflected simultaneously.

EVENT TYPE	EVENT DETAILS
New additions to the Parent Index	A new security added to the Parent Index (such as IPO and other early inclusions), will not be added to the index.
Spin-Offs	All securities created as a result of the spin- off of an existing index constituent will not be added to the index at the time of event implementation.
Merger/Acquisition	For Mergers and Acquisitions, the acquirer's post event weight will account for the proportionate amount of shares involved in deal consideration, while cash proceeds will be invested across the index.
	If an existing Index constituent is acquired by a non-Index constituent, the existing constituent will be deleted from the index and the acquiring non-constituent will not be added to the index.
Changes in Security Characteristics	A security will continue to be an index constituent if there are changes in characteristics (country, sector, size segment, etc.). Reevaluation for continued inclusion in the index will occur at the subsequent Index Review.
Further detail and illustration regarding specific treatment of corporate events	

relevant to this Index can be found in the MSCI Corporate Events Methodology book



under the sections detailing the treatment of events in Capped Weighted and Non-Market Capitalization Weighted indexes.

The MSCI Corporate Events methodology book is available at: https://www.msci.com/index-methodology.



The following sections have been modified since November 2016:

Section 3.3: Ongoing Event-Related Changes

• The details on the Corporate Events treatment are now included in Section 3.3

The following sections have been modified since September 2017:

Introduction Section

• Added the reference for the customized ESG screening criteria.