

LIBERTYQ EUROPEAN DIVIDEND INDEX METHODOLOGY

June 2023

Contents		
1	Introduction	3
2	Index Construction Methodology	4
2.1	Defining the Eligible Universe	4
2.2	Determination of the Quality Factor Score	5
2.3	Security Selection & Weighting Scheme	7
3	Maintaining the Index	8
3.1	Semi-Annual Index Reviews	8
3.2	Ongoing Event Related Changes	9
	Appendix I: Region / Country Definitions	11
	Appendix II: Calculation of Variables	12
	Appendix III: Changes to this Document	13

1 Introduction

MSCI Indexes are constructed and maintained in accordance with the MSCI Global Investable Market Indexes (GIMI) Methodology and calculated as per the MSCI Index Calculation Methodology. This methodology book provides a description of the rules and guidelines followed by MSCI for the construction and maintenance of the LibertyQ European Dividend Index¹. The LibertyQ European Dividend Index (“Index”) is designed to represent the performance of a strategy that seeks exposure to securities with high and persistent dividend income along with superior Quality characteristics in Europe.

¹ The Index is governed by a set of methodology and policy documents (“Methodology Set”), including the present index methodology document. The Methodology Set for the Index can be accessed from MSCI’s webpage <https://www.msci.com/index-methodology> in the section ‘Search Methodology by Index Name or Index Code’.

2 Index Construction Methodology

2.1 Defining the Eligible Universe

The Parent Index includes all securities belonging to the MSCI Europe Investable Market Index (IMI), excluding:

1. Securities classified in the Equity Real Estate Investment Trusts Industry Group and Mortgage Real Estate Investment Trusts Sub-Industry as per the Global Industry Classification Standard (GICS®²).
2. Within the Small Cap Family of securities, the bottom 50% Small Cap Securities by number are excluded when sorted in descending order by their free float market capitalization. Security size segmentation is done as per MSCI Global Investable Market Indexes Methodology³.

Real Estate Investment Trusts (REITs) have structurally very high dividend yield and, if included, would represent a disproportionate share of the Index. All securities belonging to the Parent Index are eligible for inclusion in the LibertyQ European Dividend Index.

Dividend yield strategies typically target not only high dividend yield, but also companies where that dividend is persistent. Therefore, the LibertyQ European Dividend Index also considers the following dividend persistence and yield screens in order to achieve a better representation of the opportunity set of a high dividend yield strategy:

- Dividend Persistence screening
- Dividend Yield screening

2.1.1 Applying the Dividend Persistence Screen

Securities with a negative year-over-year (“YoY”) Dividend per Share (DPS) growth in any of the last five years are excluded from the Index, as this is an indicator of shrinking dividend growth which could be a precursor to lower dividends. Securities which have insufficient data to calculate a YoY DPS growth rate for each of the last 5 years are also excluded from the Index.

² GICS, the Global Industry Classification Standard jointly developed by MSCI and S&P Global.

³ MSCI Global Investable Market Indexes methodology book available at <https://www.msci.com/index/methodology/latest/GIMI>

2.1.2 Applying the Dividend Yield Screen

Securities with a 5 year average monthly dividend less than 1.2 times the 5 year average monthly dividend yield of the Parent Index are excluded from the Index.

2.2 Determination of the Quality Factor Score

The Quality Factor Score is determined for each security in the eligible universe as follows:

2.2.1 Calculating the Quality Factor Z-Score

In the first step, the z-score for a descriptor for each security is calculated as described below.

$$Z = \frac{(x - \mu)}{\sigma}$$

Where:

- z is the individual descriptor z-score in the eligible universe
- x is the descriptor value for a given security
- μ is the equal weighted mean of the descriptor values of all the securities included in the eligible universe
- σ is the equal weighted standard deviation of the descriptor values of all the securities included in the eligible universe

Z-scores are then winsorized at +/-3 (i.e., the z-scores above 3 are capped at 3 and z-scores below -3 are floored at -3). If a z-score of an individual descriptor is not computed due to the unavailability of the underlying descriptor data, the eligible universe average z-score is used.

A region relative z-score is then computed for a descriptor by standardizing the individual descriptor z-scores within the sector groups for each region.

The three sector groups defined to apply region relative z-scores are:

- a) Securities belonging to the GICS “Financials” Sector (Sector “40” of the Global Industry Classification Standard (GICS) respectively)
- b) Securities belonging to the GICS “Real Estate” Sector (Sector “60” of the Global Industry Classification Standard (GICS) respectively)
- c) Securities belonging to all the other GICS sectors except “Financials” and “Real Estate” Sectors

The regions selected to compute region relative z-scores within each sector group are:

- a) Europe ex UK
- b) United Kingdom

Please refer to Appendix I for further details on region definitions

$$Z_{reg_rel} = \frac{(Z - \mu_{reg_rel})}{\sigma_{reg_rel}}$$

Where:

- Z_{reg_rel} is the region relative z-score for a descriptor
- z is the individual descriptor z-score for a given security within a sector group for each region
- μ_{reg_rel} is the equal weighted mean of the descriptor z-scores of all the securities included in a sector group for each region
- σ_{reg_rel} is the equal weighted standard deviation of the descriptor z-scores of all the securities included a sector group for each region

A region relative z-score for each sector group universe is then winsorized at +/- 3.

Quality factor Z-Score is then computed by equal weighting the region relative z-scores calculated in the previous step for each of the relevant descriptors as follows:

For all the securities in the GICS “Financials” and “Real Estate” Sectors

- a) Return on Equity (ROE)
- b) Negative of Earnings Variability
- c) Cash ROA

For all the securities except for “Financials” and “Real Estate” Sectors

- a) Return on Equity (ROE)
- b) Negative of Earnings Variability
- c) Cash ROA
- d) Negative of Leverage

Please refer to Appendix II for further details on the calculation of each variable.

2.2.2 Calculating the Final Factor Score

The Final Factor Score is computed from the Quality factor Z-score as follows:

$$Final\ Factor\ Score = \begin{cases} 1 + Z, & Z \geq 0 \\ (1 - Z)^{-1}, & Z < 0 \end{cases}$$

Where Z is the Quality factor Z-Score determined in the previous step.

2.3 Security Selection & Weighting Scheme

The LibertyQ European Dividend Index is constructed with a fixed number of securities approach. All the constituents of the eligible universe are ranked based on their Quality Factor Z-Score and 50 securities with the highest rank are selected.

The securities included are assigned weights in the proportion of Market Cap Weight*Final Factor Score.

3 Maintaining the Index

3.1 Semi-Annual Index Reviews

The LibertyQ European Dividend Index is rebalanced on a semi-annual basis, usually as of the close of the last business day of May and November, coinciding with the May and November Index Reviews of the MSCI Global Investable Market Indexes. Descriptor data as of the end of April and October are used respectively. The pro forma Index is typically announced nine business days before the effective date.

At each rebalancing, a constraint factor (CF) is calculated for each constituent in the Index. The constraint factor is defined as the weight in the Index at the time of the rebalancing divided by the weight in the Parent Index. The constraint factor as well as the constituents in the Index remains constant between Index Reviews except in case of corporate events as described in section 3.2.

3.1.1 Buffer Rules

To reduce Index turnover and enhance stability, buffer rules are applied as follows:

Dividend Persistence Screening Buffer

If a security is already an Index constituent but it has a negative YoY DPS growth in only one of the last five years, it will still be allowed to remain in the Index. If it has a negative YoY DPS growth in more than one year, it will be excluded from the Index. Securities which have insufficient data to calculate a YoY DPS growth rate for each of the last 5 years are excluded from the Index.

Dividend Yield Screening Buffer

If a security is already an Index constituent, it will remain in the Index as long as its 5 year average monthly dividend is greater than or equal to 1.1 times the 5 year average monthly dividend yield of the Parent Index.

Security Selection Buffer

A security selection buffer of 100% is applied at each Index Review.

For example, the Index targets 50 securities and the buffers are applied between rank 1 and 100. The existing constituents that have a final factor score rank between 1 and 100 are added until the number of securities reaches 50. If the number of securities is below 50 after this step, the remaining securities in the Parent Index with the highest final factor score rank are added until the number of securities in the Index reaches 50.

Turnover Buffer

A turnover buffer of 50% is applied at each Index Review. For example, if the then current rebalancing results in changing the weight of a security from x% to y% in the Index, then the effective change in weight will be:

$$\text{Effective pro forma constituent weight} = x + (y-x)/2$$

The turnover buffer is applied on the uncapped weights of existing and pro forma constituents and is not applied on deletions. After the turnover buffers are applied, weight capping of 2% is applied at the issuer level.

3.2 Ongoing Event Related Changes

The general treatment of corporate events in the LibertyQ European Dividend 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 LibertyQ European Dividend Index, the changes made to the Parent Index during intermediate Index Reviews will be neutralized in the LibertyQ European Dividend Index.

The following section briefly describes the treatment of common corporate events within the LibertyQ European Dividend 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 be added to the Index at the time of event implementation. Reevaluation for continued inclusion in the Index will occur at the subsequent Index Review.
Merger/Acquisition	<p>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.</p> <p>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.</p>
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/latest/CE>

Appendix I: Region / Country Definitions

The Parent Index is composed of the European countries. Currently, this includes the following countries, under each defined region

Europe ex UK	UK
AUSTRIA	UNITED KINGDOM
BELGIUM	
DENMARK	
FINLAND	
FRANCE	
GERMANY	
IRELAND	
ISRAEL	
ITALY	
NETHERLANDS	
NORWAY	
PORTUGAL	
SPAIN	
SWEDEN	
SWITZERLAND	

Whenever MSCI changes the country constituents of the Parent Index, the constituent countries of this Index will change accordingly. Changes in the constituent companies of the MSCI Standard Country Indexes that comprise this Index will also be reflected in this Index.

Appendix II: Calculation of Variables

Factor	Descriptor	Computation Details
Quality	Return on Equity (ROE)	$\frac{\text{Trailing 12 months earnings per share}}{\text{Latest book value per share}}$
	Earnings Variability	Earnings variability is defined as the standard deviation of y-o-y earnings per share growth over the last five fiscal years
	Cash ROA	$\frac{\text{Latest Fiscal Year Net Operating Cash Flow}}{\text{Latest Fiscal Year Total Assets}}$
	Leverage	<p>Leverage is defined as the average of Market Leverage, Book Leverage and Debt to Assets.</p> <p>Market Leverage = $(ME + PE + LD)/ME$,</p> <p>Book Leverage = $(BE + PE + LD)/BE$,</p> <p>Debt to Assets = TD/TA</p> <p>Where ME = Market Value of Equity on the Last Trading day, PE = Book Value of the Preferred Equity, LD = Most recent Book Value of the Long-Term Debt, BE = Book Value of the Equity, TD = Total Debt, TA is most recent Book Value of Total Assets</p>

Appendix III: Changes to this Document

The following sections have been modified since May 2017:

- Appendix II in the previous version of the methodology book describing the Corporate Events treatment has been deleted. The details on the Corporate Events treatment are now included in Section 3.2.

The following sections have been modified as of June 2023:

- Methodology book was updated to reflect the transition of the MSCI Global Investable Market Indexes (GIMI) to Quarterly Comprehensive Index Reviews.
- All references to “Semi-Annual Index Reviews” and “Quarterly Index Reviews” of the MSCI GIMI were replaced with “Index Reviews.”
- Section 2.1: Updated to reflect the change from Industry to Industry Group for Equity Real Estate Investment Trusts under the GICS structure

Contact us

[msci.com/contact-us](https://www.msci.com/contact-us)

AMERICAS

Americas	1 888 588 4567 *
Atlanta	+ 1 404 551 3212
Boston	+ 1 617 532 0920
Chicago	+ 1 312 675 0545
Monterrey	+ 52 81 1253 4020
New York	+ 1 212 804 3901
San Francisco	+ 1 415 836 8800
São Paulo	+ 55 11 3706 1360
Toronto	+ 1 416 628 1007

EUROPE, MIDDLE EAST & AFRICA

Cape Town	+ 27 21 673 0100
Frankfurt	+ 49 69 133 859 00
Geneva	+ 41 22 817 9777
London	+ 44 20 7618 2222
Milan	+ 39 02 5849 0415
Paris	0800 91 59 17 *

ASIA PACIFIC

China North	10800 852 1032 *
China South	10800 152 1032 *
Hong Kong	+ 852 2844 9333
Mumbai	+ 91 22 6784 9160
Seoul	00798 8521 3392 *
Singapore	800 852 3749 *
Sydney	+ 61 2 9033 9333
Taipei	008 0112 7513 *
Thailand	0018 0015 6207 7181 *
Tokyo	+ 81 3 5290 1555

* toll-free

About MSCI

MSCI is a leading provider of critical decision support tools and services for the global investment community. With over 50 years of expertise in research, data and technology, we power better investment decisions by enabling clients to understand and analyze key drivers of risk and return and confidently build more effective portfolios. We create industry-leading research-enhanced solutions that clients use to gain insight into and improve transparency across the investment process.

To learn more, please visit www.msci.com.

The process for submitting a formal index complaint can be found on the index regulation page of MSCI's website at: <https://www.msci.com/index-regulation>.

Notice and Disclaimer

This document and all of the information contained in it, including without limitation all text, data, graphs, charts (collectively, the "Information") is the property of MSCI Inc. or its subsidiaries (collectively, "MSCI"), or MSCI's licensors, direct or indirect suppliers or any third party involved in making or compiling any Information (collectively, with MSCI, the "Information Providers") and is provided for informational purposes only. The Information may not be modified, reverse-engineered, reproduced or disseminated in whole or in part without prior written permission from MSCI. All rights in the Information are reserved by MSCI and/or its Information Providers.

The Information may not be used to create derivative works or to verify or correct other data or information. For example (but without limitation), the Information may not be used to create indexes, databases, risk models, analytics, software, or in connection with the issuing, offering, sponsoring, managing or marketing of any securities, portfolios, financial products or other investment vehicles utilizing or based on, linked to, tracking or otherwise derived from the Information or any other MSCI data, information, products or services.

The user of the Information assumes the entire risk of any use it may make or permit to be made of the Information. NONE OF THE INFORMATION PROVIDERS MAKES ANY EXPRESS OR IMPLIED WARRANTIES OR REPRESENTATIONS WITH RESPECT TO THE INFORMATION (OR THE RESULTS TO BE OBTAINED BY THE USE THEREOF), AND TO THE MAXIMUM EXTENT PERMITTED BY APPLICABLE LAW, EACH INFORMATION PROVIDER EXPRESSLY DISCLAIMS ALL IMPLIED WARRANTIES (INCLUDING, WITHOUT LIMITATION, ANY IMPLIED WARRANTIES OF ORIGINALITY, ACCURACY, TIMELINESS, NON-INFRINGEMENT, COMPLETENESS, MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE) WITH RESPECT TO ANY OF THE INFORMATION.

Without limiting any of the foregoing and to the maximum extent permitted by applicable law, in no event shall any Information Provider have any liability regarding any of the Information for any direct, indirect, special, punitive, consequential (including lost profits) or any other damages even if notified of the possibility of such damages. The foregoing shall not exclude or limit any liability that may not by applicable law be excluded or limited, including without limitation (as applicable), any liability for death or personal injury to the extent that such injury results from the negligence or willful default of itself, its servants, agents or sub-contractors.

Information containing any historical information, data or analysis should not be taken as an indication or guarantee of any future performance, analysis, forecast or prediction. Past performance does not guarantee future results.

The Information should not be relied on and is not a substitute for the skill, judgment and experience of the user, its management, employees, advisors and/or clients when making investment and other business decisions. All Information is impersonal and not tailored to the needs of any person, entity or group of persons.

None of the Information constitutes an offer to sell (or a solicitation of an offer to buy), any security, financial product or other investment vehicle or any trading strategy.

It is not possible to invest directly in an index. Exposure to an asset class or trading strategy or other category represented by an index is only available through third party investable instruments (if any) based on that index. MSCI does not issue, sponsor, endorse, market, offer, review or otherwise express any opinion regarding any fund, ETF, derivative or other security, investment, financial product or trading strategy that is based on, linked to or seeks to provide an investment return related to the performance of any MSCI index (collectively, "Index Linked Investments"). MSCI makes no assurance that any Index Linked Investments will accurately track index performance or provide positive investment returns. MSCI Inc. is not an investment adviser or fiduciary and MSCI makes no representation regarding the advisability of investing in any Index Linked Investments.

Index returns do not represent the results of actual trading of investible assets/securities. MSCI maintains and calculates indexes, but does not manage actual assets. The calculation of indexes and index returns may deviate from the stated methodology. Index returns do not reflect payment of any sales charges or fees an investor may pay to purchase the securities underlying the index or Index Linked Investments. The imposition of these fees and charges would cause the performance of an Index Linked Investment to be different than the MSCI index performance.

The Information may contain back tested data. Back-tested performance is not actual performance, but is hypothetical. There are frequently material differences between back tested performance results and actual results subsequently achieved by any investment strategy.

Constituents of MSCI equity indexes are listed companies, which are included in or excluded from the indexes according to the application of the relevant index methodologies. Accordingly, constituents in MSCI equity indexes may include MSCI Inc., clients of MSCI or suppliers to MSCI. Inclusion of a security within an MSCI index is not a recommendation by MSCI to buy, sell, or hold such security, nor is it considered to be investment advice.

Data and information produced by various affiliates of MSCI Inc., including MSCI ESG Research LLC and Barra LLC, may be used in calculating certain MSCI indexes. More information can be found in the relevant index methodologies on www.msci.com.

MSCI receives compensation in connection with licensing its indexes to third parties. MSCI Inc.'s revenue includes fees based on assets in Index Linked Investments. Information can be found in MSCI Inc.'s company filings on the Investor Relations section of msci.com.

MSCI ESG Research LLC is a Registered Investment Adviser under the Investment Advisers Act of 1940 and a subsidiary of MSCI Inc. Neither MSCI nor any of its products or services recommends, endorses, approves or otherwise expresses any opinion regarding any issuer, securities, financial products or instruments or trading strategies and MSCI's products or services are not a recommendation to make (or refrain from making) any kind of investment decision and may not be relied on as such, provided that applicable products or services from MSCI ESG Research may constitute investment advice. MSCI ESG Research materials, including materials utilized in any MSCI ESG Indexes or other products, have not been submitted to, nor received approval from, the United States Securities and Exchange Commission or any other regulatory body. MSCI ESG and climate ratings, research and data are produced by MSCI ESG Research LLC, a subsidiary of MSCI Inc. MSCI ESG Indexes, Analytics and Real Estate are products of MSCI Inc. that utilize information from MSCI ESG Research LLC. MSCI Indexes are administered by MSCI Limited (UK).

Please note that the issuers mentioned in MSCI ESG Research materials sometimes have commercial relationships with MSCI ESG Research and/or MSCI Inc. (collectively, "MSCI") and that these relationships create potential conflicts of interest. In some cases, the issuers or their affiliates purchase research or other products or services from one or more MSCI affiliates. In other cases, MSCI ESG Research rates financial products such as mutual funds or ETFs that are managed by MSCI's clients or their affiliates, or are based on MSCI Inc. Indexes. In addition, constituents in MSCI Inc. equity indexes include companies that subscribe to MSCI products or services. In some cases, MSCI clients pay fees based in whole or part on the assets they manage. MSCI ESG Research has taken a number of steps to mitigate potential conflicts of interest and safeguard the integrity and independence of its research and ratings. More information about these conflict mitigation measures is available in our Form ADV, available at <https://adviserinfo.sec.gov/firm/summary/169222>.

Any use of or access to products, services or information of MSCI requires a license from MSCI. MSCI, Barra, RiskMetrics, IPD and other MSCI brands and product names are the trademarks, service marks, or registered trademarks of MSCI or its subsidiaries in the United States and other jurisdictions. The Global Industry Classification Standard (GICS) was developed by and is the exclusive property of MSCI and S&P Global Market Intelligence. "Global Industry Classification Standard (GICS)" is a service mark of MSCI and S&P Global Market Intelligence.

MIFID2/MIFIR notice: MSCI ESG Research LLC does not distribute or act as an intermediary for financial instruments or structured deposits, nor does it deal on its own account, provide execution services for others or manage client accounts. No MSCI ESG Research product or service supports, promotes or is intended to support or promote any such activity. MSCI ESG Research is an independent provider of ESG data.

Privacy notice: For information about how MSCI collects and uses personal data, please refer to our Privacy Notice at <https://www.msci.com/privacy-pledge>.