

Index Methodology

Bloomberg Eurozone 50 Index

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1. Introduction

The Bloomberg Eurozone 50 Index is a market capitalization weighted equity benchmark that aims to represent the performance of the 50 largest companies ranked by market capitalization classified in the Developed Markets of the Eurozone.

1.1. Index Overview

Name	Bloomberg Eurozone 50 Index
Ticker	EUROD50 (Price Return) EURODT50 (Total Return) EURODN50 (Net Total Return)
Currency	EUR
Inception Date	Q2 2021
Weighting	Market Capitalization
Publication	Weekdays (except January 1 st)

2. Index Eligibility Process

2.1. Parent Index

In order to be eligible for the Bloomberg Eurozone 50 Index, a security must be a member of the Bloomberg Eurozone Developed Markets Large & Mid cap Index.

Please refer to the [Bloomberg Global Equity Index methodology](#) for details about eligibility criteria.

3. Index Selection Process

3.1. Size

All securities that satisfy the Index Eligibility Process are considered for inclusion in the Index. Only the largest 50 companies by Company free float market capitalization¹ are selected to be Index Members.

4. Index Maintenance

To ensure that the Index accurately reflects the aggregate performance of its constituent members, the Index must be rebalanced and reconstituted periodically and maintained on a daily basis for corporate actions, any restatements, data integrity and changes to the methodology.

The Index Reconstitution is performed semi-annually to update the country size cut-offs and review the eligibility screenings. The Index Rebalance is performed quarterly to update the largest 50 Index Members, BICS and weights.

4.1. Index Rebalance and Reconstitution

As part of the Index Reconstitution process, the country cut-offs and the eligible equity universe are updated. Resulting Index Member and weight changes are implemented on the 2nd Wednesday in March and September using data as of the

¹ Calculated as the sum of the issuer's underlying securities' free float market capitalization

Selection Dates of January and July respectively. For more details, refer to the [Bloomberg Global Equity Index methodology](#).

The Index Member's weights are updated at each Index Rebalance on the 2nd Wednesday in March, June, September, and December (Effective Date) using data as of any business day of the last week of January, April, July, and October, respectively (Selection Date). Simultaneously and unlike for the global Indices, the Index members will be updated to reflect the 50 largest Companies of the Parent Index based on their market capitalization as of the Selection Dates.

Index Members and weights can be found using **<ticker> Index MEMB <GO>**

The changes are generally announced with 10 business days advance notification starting from the last Wednesday in February, May, August, and November (Announcement Date).

Each Rebalance follows the exchange calendar for NYSE trading days. Should a Rebalance fall on a NYSE exchange holiday, it will be postponed to the next business day.

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Selection Date	Last Week			Last Week			Last Week			Last Week		
Announcement Date		Last Wed			Last Wed			Last Wed			Last Wed	
Effective Date			2 nd Wed			2 nd Wed			2 nd Wed			2 nd Wed

4.2. Corporate Actions

Refer to [Bloomberg Global Equity Indices Corporate Action Methodology](#) for the general treatment of corporate actions, unless stated otherwise in the sections below.

Past and upcoming corporate actions at security level can be found using **<ticker> CACS <GO>** and **<ticker> DVD <GO>** functions on the Bloomberg Terminal.

4.2.1. Spin-off

Child being spun-off from Index Member are added on the ex-date and remains in the Index if the Child security qualifies to be part of the Parent Index.

If this condition is not met, the security is typically removed from the Index at the open of the 5th trading from the ex-date².

4.2.2. IPO

Newly listed Securities are not eligible for fast-track addition to the Bloomberg Eurozone 50 Index. Such securities will be assessed for potential addition as part of the next semi-annual Index Reconstitution. Note that a minimum trading

² Or 3 full business days following Determination Date, which corresponds to the market close on the later of 1) the ex-date, 2) the first business day the child company commences trading or 3) the spin-off pay-date (if known three full business days preceding)

period of 3 months is part of the requirements for addition to the Parent Index.

4.2.3. Replacement Policy

Index securities are not replaced outside of the quarterly reconstitution.

An Index Member being acquired by a non-Index Member is not replaced by the acquirer in the Index at the time of the corporate action completion.

Appendices

Appendix I: Float Calculations

The float is the total number of shares available for trading. Bloomberg calculates a security's free float as follows:

$$\text{Float shares} = \text{Total Shares outstanding} - \text{Stagnant Shares}$$

Float data is sourced directly from Bloomberg proprietary data.

Stagnant shareholders:

- Central Bank
- Government
- Corporation: Legal entities owned by shareholders that do not actively manage money. If corporations own stock in another public Company, it is usually the result of a corporate partnership, which results in long term relationships.
- Holding companies: An entity that acts as a parent Company to many subsidiaries. Holding companies typically do not produce any goods or services themselves.
- Foundation: Private, non-profit and tax-free organizations that collect and distribute money for charitable purposes.
- Employee Stock Ownership Plan (ESOP)
- Individuals: Any individual filer (person) is considered a stagnant shareholder.
- Insiders: Names Executives or Board members of the issuer are stagnant holders since their incentives are aligned with the Company and its performance.
- Trust/Family Trust: A fiduciary arrangement that allows a third party or trustee to hold assets on behalf of a beneficiary or beneficiaries.

On the contrary, the below shareholder types are considered as free float.

- Bank
- Hedge Fund
- Endowment
- Sovereign Wealth Fund
- Insurance Company
- Investment advisor
- Pension fund
- 13F Filers (US SEC)
- UK Share Registry (REG)

Note that a shareholder, regardless of its type, is considered Stagnant if it owns more than 25% of the shares outstanding.

The security's free float percentage can be found on [<ticker> HDS <GO>](#) page on the Bloomberg Terminal.

Appendix II: Benchmark Oversight and Governance

Benchmark Governance, Audit and Review Structure

Bloomberg Index Services Limited (BISL) uses two primary committees to provide overall governance and effective oversight of its benchmark administration activities:

- The Product, Risk & Operations Committee ("PROC") provides direct governance and is responsible for the first line of controls over the creation, design, production and dissemination of benchmark Indices, strategy Indices and fixings administered by BISL, including the Index. The PROC is composed of Bloomberg personnel with significant experience or relevant expertise in relation to financial benchmarks. Meetings are attended by Bloomberg Legal & Compliance personnel. Nominations and removals are subject to review by the BOC, discussed below.
- The oversight function is provided by Bloomberg's Benchmark Oversight Committee ("BOC"). The BOC is independent of the PROC and is responsible for reviewing and challenging the activities carried out by the PROC. In carrying out its oversight duties, the BOC receives reports of management information both from the PROC as well as Bloomberg Legal & Compliance members engaged in second level controls.

On a quarterly basis, the PROC reports to the BOC on governance matters, including but not limited to client complaints, the launch of new benchmarks, operational incidents (including errors & restatements), major announcements and material changes concerning the benchmarks, the results of any reviews of the benchmarks (internal or external) and material stakeholder engagements.

Index and Data Reviews

The Index Administrator will review the Indices (both the rules of construction and data inputs) on a periodic basis, not less frequently than annually, to determine whether they continue to reasonably measure the intended underlying market interest, the economic reality or otherwise align with their stated objective. More frequent reviews may result from extreme market events and/or material changes to the applicable underlying market interests.

In addition to material changes, BISL may from time to time terminate one or more Indices ("Discontinued Indices"), whether due to changes in market structure, a lack of requisite data, insufficient usage, or for other regulatory or practical concerns. The process for terminating such Discontinued Indices is as follows:

The PROC will review proposed terminations, taking into account the reasons for termination, the impact on users (if any), the availability of alternative products and other such factors. If termination is approved, users will be provided as much prior notice as is reasonable under the circumstances, typically 90 days. In the event there is little or no known usage identified, the Discontinued Indices may be terminated with less (or no) notice, as applicable. In the event the Discontinued Indices are licensed for use as the basis of an ETF or other widely-available financial product or is otherwise determined by BISL to be an important benchmark without reasonable substitutes, the notice period may be extended, as warranted. Any advance notice period is subject to BISL being reasonably able to continue administering and calculating such benchmark during such period (for example, BISL has access to requisite data on commercially reasonable terms, is not subject to any litigation or other claims, has adequate internal resources and capabilities, etc.). Terminations and associated user engagement decisions made by the PROC are

subject to review by BISL's oversight function, the BOC.

Criteria for data inputs include reliable delivery and active underlying markets. Whether an applicable market is active depends on whether there are sufficient numbers of transactions (or other indications of price, such as indicative quotes) in the applicable constituents (or similar underlying constituent elements) that a price (or other value, as applicable) may be supplied for such constituent(s).

Other than as set forth in this Methodology, there are no minimum liquidity requirement for Index constituents and/or minimum requirements or standards for the quantity or quality of the input data. The review will be conducted by product managers of the Indices in connection with the periodic rebalancing of the Indices or as otherwise appropriate.

Any resulting change to the Methodology deemed to be material (discussed below) will be subject to the review of the PROC under the oversight of the BOC, each of which committees shall be provided all relevant information and materials it requests relating to the change. Details regarding the PROC and BOC are described above.

Material changes will be reflected and tracked in updated versions of this Methodology.

Material changes related to the Indices will be made available in advance to affected stakeholders whose input will be solicited. The stakeholder engagement will set forth the rationale for any proposed changes as well as the timeframe and process for responses. The Index Administrator will endeavor to provide at least two weeks for review prior to any material change going into effect. In the event of exigent market circumstances, this period may be shorter. Subject to requests for confidentiality, stakeholder feedback and the Index Administrator's responses will be made accessible upon request.

In determining whether a change to an Index is material, the following factors shall be taken into account:

- The economic and financial impact of the change;
- Whether the change affects the original purpose of the Index; and/or
- Whether the change is consistent with the overall objective of the Index and the underlying market interest it seeks to measure.

Internal and External Reviews

BISL's Index administration is also subject to Bloomberg's Compliance function, which periodically reviews various aspects of its businesses to determine whether it is adhering to applicable policies and procedures, and assess whether applicable controls are functioning properly. In addition, Bloomberg may from time to time appoint an independent external auditor with appropriate experience and capability to review adherence to benchmark regulation. The frequency of such external reviews will depend on the size and complexity of the operations and the breadth and depth of Index use by stakeholders.

Expert Judgement

The Indices are rules-based, and their construction is designed to consistently produce values without the exercise of expert judgment or discretion. Nevertheless, BISL may use expert judgment or discretion with regards to the following:

- Index restatements
- Extraordinary circumstances during a market emergency
- Data interruptions, issues, and closures

- Significant acquisitions involving a non-Index Company

When expert judgment or discretion is required, BISL undertakes to be consistent in its application, with recourse to written procedures outlined in the methodology of the Indices and internal procedures manuals. In certain circumstances exercises of expert judgment or discretion are reviewed by senior members of BISL management and Bloomberg Compliance teams, and are reported to the PROC, BISL's governance committee, which operates under the supervision of BISL's oversight function, the BOC. BISL also maintains and enforces a code of ethics to prevent conflicts of interest from inappropriately influencing index construction, production, and distribution, including the use of expert judgment or discretion.

Data Providers and Data Extrapolation

The Indices are rules-based, and their construction is designed to consistently produce Index Levels without the exercise of discretion. The Indices are produced without the interpolation or extrapolation of input data.

In addition, the Index Administrator seeks to avoid contributions of input data that may be subject to the discretion of the source of such data and instead seeks to use input data that is readily available and/or distributed for a number of non-index or benchmark creation purposes. Accordingly, the Indices require no 'contributors' to produce and no codes of conduct with any such sources are required.

Conflicts of Interest

The Index confers on BISL discretion in making certain determinations, calculations and corrections from time to time. In making those determinations, calculations and corrections, the Index Administrator has no obligation to take the needs of any Product Investor or any other party into consideration. BISL is committed to avoiding and, where necessary, managing actual or potential conflicts of interest in the BISL decision-making process and has established a Conflicts of Interest Policy to minimize or resolve actual or potential conflicts of interest. BISL does not create, trade or market Products.

Restatement Policy

Bloomberg strives to provide accurate calculation of its indices. However, to the extent a material error in Index Values is uncovered following publication and dissemination, a public notification will be made alerting of such error and what course of action will be undertaken and when. In such situations, it can be decided to either

- 1) Do not correct until the next index review;
- 2) Apply a correction going forward with advance notification; or
- 3) Restate the historical indices

Bloomberg reviews discrepancies and restates indices if the impact is in excess of 3 bps¹ and occurred in the last 2 business days. In some cases, Bloomberg may apply discretion and determine that a restatement is required. The decision will take into consideration the following factors (not in order of importance):

- The relative importance of the data field impacted by the error
- Whether the indices were replicable
- When the error occurred and when it was discovered
- The number of indices and sub-indices affected
- Whether the impacted indices are linked to tradable products
- The magnitude of the error

- The burden of restatement on client re-processing relative to the impact of the error
- The impact of the restatement on analytical tools

A decision to restate any Index results in the restatement of all impacted Indices. Real-time indices are not considered for restatement, all real-time dissemination is considered indicative. Discrepancies discovered after 12 months will not be corrected.

Bloomberg will follow, but will not commit to, actions in accordance to the following guidelines.

Action	Error	Event types	Correction at Next Review	Going Forward Correction	Historical Restatement
Corporate Actions					
Addition/ Deletion	Incorrect addition	Spinoff, IPO	Yes, if warranted	No	No
	Incorrect deletion	M&A, delisting, bankruptcy	Yes, if warranted	No	No
	Incorrect weight	IPO, spinoff	No	Correction with 2 day notice if it doesn't qualify for restatement	Yes, if qualifies for restatement
Price Adjustment on ex-date	Incorrect terms applied	Split, stock dividend, spinoff, special dividend, rights issue	No	Next day correction if it doesn't qualify for restatement	Yes, if qualifies for restatement
	Cancelled / missed / postponed		No	Next day correction if it doesn't qualify for restatement	Yes, if qualifies for restatement
Cash distribution	Incorrect amount, currency, tax rate	Regular cash dividend	No	Next day delta reinvestment if it doesn't qualify for restatement	Delta reinvestment if qualifies for restatement
	Cancelled/postponed		No	Next day negative reinvestment if it doesn't qualify for restatement	Negative reinvestment if qualifies for restatement
	Missed event		No	Next day reinvestment if it doesn't qualify for restatement	Reinvestment if qualifies for restatement
Data Points					
Identifier	Missed identifier change		No	Next day change	No
FOL	Missed FOL change	Overstated FOL	No	Change with 2 day notice	No
		Understate FOL	Yes	No	No
Withholding tax rate	Missed change in tax rate applicable to foreign investors	Incorrect tax rate applied to reinvested dividends	No	Negative reinvestment if it doesn't qualify for restatement	Negative reinvestment if qualifies for restatement

Closing Market Price	Official closing market price change	Incorrect closing market price used in index calculations	No	Next day correction if it doesn't qualify for restatement	Yes, if qualifies for restatement
Intraday Market Price	Revised intraday market price	Incorrect intraday market price	No	No	No
FX rates	Official FX rate	Incorrect FX rate used in index calculations	No	Next day correction if it doesn't qualify for restatement	Yes, if qualifies for restatement

Glossary of Terms

Term	Definition
Announcement Date	Date at which the Index review changes are announced the first time. Marks the beginning of the 10 business day pro-forma period.
Company	An issuer representing the sum of its underlying securities.
Effective Date	The date upon which a Rebalance is made effective. For the avoidance of doubt the Rebalance becomes effective on the close of the Rebalance Date.
Index Member	A security that is a constituent of an Index.
Index Shares	Shares of an Index Member within an Index. The number of Index Shares are updated at each quarterly Rebalance and adjusted intra-quarter for corporate actions.
Parent Index	Eligible universe to select Index Members from.
Rebalance	The process of selecting the largest 50 companies from the Parent Index and re-weighting the Index Members.
Reconstitution	The process of updating the country cut-offs and the eligible equity universe.
Selection Date	Date at which the relevant data points are taken for each security for the Reconstitution or Rebalance.

Version Tracker

Date	Update
7/6/2021	Index creation.

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New York
+1-212-318-2000

London
+44-20-7330-7500

Singapore
+65-6212-1000

Hong Kong
+852-2977-6000

Tokyo
+81-3-3201-8900

Sydney
+61-2-9777-8600

indexhelp@bloomberg.net

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