

INDEX GUIDELINE

SOLACTIVE BBVA RESOURCE SCARCITY EUR INDEX

Version 1.0

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TABLE OF CONTENTS

Introduction	3
1. Index Specifications	4
1.1. Scope of the Index	4
1.2. Identifiers and Publication	4
1.3. Initial Level of the Index	5
1.4. Prices and calculation frequency	5
1.5. Licensing.....	5
2. Index Selection	6
2.1. Index Universe Requirements.....	6
2.2. Selection of the Index Components	6
2.3. Weighting of the Index Components.....	10
3. Rebalance	11
3.1. Ordinary Rebalance	11
3.2. Extraordinary Rebalance	11
4. Calculation of the Index	12
4.1. Index formula	12
4.2. Accuracy	12
4.3. Adjustments.....	12
4.4. Corporate actions.....	13
4.5. Recalculation.....	14
4.6. Market Disruption.....	14
5. Miscellaneous	15
5.1. Discretion	15
5.2. Methodology Review.....	15
5.3. Changes in calculation method.....	15
5.4. Termination	16
5.5. Oversight	16
6. Definitions.....	17
7. Appendix.....	19
7.1 Sectors.....	19
7.2 Countries.....	23
7.3 Bucket Weights.....	23



INTRODUCTION

This document (the “**GUIDELINE**”) is to be used as a guideline with regard to the composition, calculation and maintenance of the Solactive BBVA Resource Scarcity Index (the “**INDEX**”). Any amendments to the rules made to the **GUIDELINE** are approved by the **OVERSIGHT COMMITTEE** specified in Section 5.5. The **INDEX** is owned, calculated, administered and published by Solactive AG (“**SOLACTIVE**”) assuming the role as administrator (the “**INDEX ADMINISTRATOR**”) under the Regulation (EU) 2016/1011 (the “**BENCHMARK REGULATION**” or “**BMR**”). The name “Solactive” is trademarked.

The text uses defined terms which are formatted with “SMALL CAPS”. Such Terms shall have the meaning assigned to them as specified in Section 6 (Definitions).

The **GUIDELINE and the policies and methodology documents referenced herein contain the underlying principles and rules regarding the structure and operation of the **INDEX**. **SOLACTIVE** does not offer any explicit or tacit guarantee or assurance, neither pertaining to the results from the use of the **INDEX** nor the level of the **INDEX** at any certain point in time nor in any other respect. **SOLACTIVE** strives to the best of its ability to ensure the correctness of the calculation. There is no obligation for **SOLACTIVE** – irrespective of possible obligations to issuers – to advise third parties, including investors and/or financial intermediaries, of any errors in the **INDEX**. The publication of the **INDEX** by **SOLACTIVE** does not constitute a recommendation for capital investment and does not contain any assurance or opinion of **SOLACTIVE** regarding a possible investment in a financial instrument based on this **INDEX**.**

*The Index is not calculated, sponsored, administered or published by Banco Bilbao Vizcaya Argentaria, S.A. (“**BBVA**”) nor does **BBVA** act as an administrator or a contributor of the Index nor does **BBVA** offer any express or implicit guarantee or assurance with regard to the calculation, publication or results of using the Index and/or Index trade mark or the Index Price at any time or in any other respect. The Index is solely calculated, administered and published by **SOLACTIVE**. For the avoidance of doubt, there is no corporate ownership relationship between **SOLACTIVE** and **BBVA**, being independent companies, and **BBVA** will not be responsible for the Index in any case.*



1. INDEX SPECIFICATIONS

1.1. SCOPE OF THE INDEX

Category	Description
Asset Class	Equity
Strategy	Representation of securities from the Developed Markets universe that control or increase efficiency of Scarce Resources.
Regional Allocation	Developed Markets
Rebalancing Fee	
Rebalancing Frequency	Annually

1.2. IDENTIFIERS AND PUBLICATION

The INDEX is published under the following identifiers:

Name	ISIN	Currency	Type	RIC	BBG ticker
Solactive BBVA Resource Scarcity EUR Index PR	DE000SL0E2N8	EUR	PR*	.SBVRESEP	
Solactive BBVA Resource Scarcity EUR Index NTR	DE000SL0E2P3	EUR	NTR*	.SBVRESEN	SBVRESEN
Solactive BBVA Resource Scarcity EUR Index TR	DE000SL0E2Q1	EUR	GTR*	.SBVRESET	

*PR, NTR, GTR means that the Index is calculated as price return, net total return, gross total return Index as described in the Equity Index Methodology, which is available on the SOLACTIVE website: <https://www.solactive.com/documents/equity-index-methodology/>

The INDEX is published on the website of the INDEX ADMINISTRATOR (www.solactive.com) and is, in addition, available via the price marketing services of Boerse Stuttgart GmbH and may be distributed to all of its affiliated vendors. Each vendor decides on an individual basis as to whether it will distribute or display the INDEX via its information systems.

Any publication in relation to the INDEX (e.g. notices, amendments to the GUIDELINE) will be available at the website of the INDEX ADMINISTRATOR: <https://www.solactive.com/news/announcements/>.



1.3. INITIAL LEVEL OF THE INDEX

The initial level of the INDEX on the 09/05/2016, the START DATE, is 1000. Historical values from the 07/02/2022, the LIVE DATE, will be recorded in accordance with Article 8 of the BMR. Levels of the INDEX published for a period prior to the LIVE DATE have been back-tested.

1.4. PRICES AND CALCULATION FREQUENCY

The level of the INDEX is calculated on each CALCULATION DAY from 01:00 a.m. to 10:50 p.m. CET based on the TRADING PRICES on the EXCHANGES on which the INDEX COMPONENTS are listed. TRADING PRICES of INDEX COMPONENTS not listed in the INDEX CURRENCY are converted using the current Intercontinental Exchange (ICE) spot foreign exchange rate. Should there be no current TRADING PRICE for an INDEX COMPONENT, the later of: (i) the most recent CLOSING PRICE; or (ii) the last available TRADING PRICE for the preceding TRADING DAY is used in the calculation.

In addition to the intraday calculation a closing level of the INDEX for each CALCULATION DAY is also calculated. This closing level is based on the CLOSING PRICES for the INDEX COMPONENTS on the respective EXCHANGES on which the INDEX COMPONENTS are listed. The CLOSING PRICES of INDEX COMPONENTS not listed in the INDEX CURRENCY are converted using the 04:00 p.m. New York City time WM Fixing quoted by Reuters. If there is no 04:00 p.m. New York City time WM Fixing for the relevant CALCULATION DAY, the last available 04:00 p.m. New York City time WM Fixing will be used for the closing level calculation.

1.5. LICENSING

Licenses to use the INDEX as the underlying value for financial instruments, investment funds and financial contracts may be issued to stock exchanges, banks, financial services providers and investment houses by SOLACTIVE.



2. INDEX SELECTION

On each SELECTION DAY, the INDEX ADMINISTRATOR will revise the composition of the INDEX.

In a first step, the INDEX ADMINISTRATOR determines the INDEX UNIVERSE in accordance with Section 2.1. The INDEX UNIVERSE comprises all those financial instruments which fulfill the INDEX UNIVERSE REQUIREMENTS (as specified in Section 2.1) and will constitute a starting pool from which the components of the INDEX will be selected. Based on this INDEX UNIVERSE, the new composition of the INDEX will be determined by applying the rules outlined in Section 2.2.

Each new INDEX COMPONENT will be assigned a weight as described in Section 2.3.

2.1. INDEX UNIVERSE REQUIREMENTS

The INDEX UNIVERSE is comprised of all financial instruments which fulfill the below requirements (the "**INDEX UNIVERSE REQUIREMENTS**"):

Is a **GBS INDEX COMPONENT** of the

- Solactive GBS Developed Markets Large & Mid Cap USD Index (ISIN: DE000SLA41B6),

on a SELECTION DAY, as published on the SOLACTIVE website: <https://www.solactive.com>.

The determination of the INDEX UNIVERSE is fully rule-based and the INDEX ADMINISTRATOR cannot make any discretionary decisions.

2.2. SELECTION OF THE INDEX COMPONENTS

Based on the INDEX UNIVERSE, the initial composition of the INDEX as well as any selection for an ordinary rebalance is determined on the SELECTION DAY in accordance with the following rules:

(the "**INDEX COMPONENT REQUIREMENTS**")

In a first step, initial exclusions are performed according to the following rules:

1. Remove low liquidity stocks. Low liquidity is defined as less than EUR 3 million where liquidity is calculated as the minimum of 1-month and 6-month AVERAGE DAILY VALUE TRADED.
2. Remove low market capitalization stocks. Low market capitalization is defined as less than 10% of the median FREE FLOAT MARKET CAPITALIZATION of the INDEX UNIVERSE.

In case of multiple listings of a company, only the primary listing is eligible for inclusion in the INDEX.

In a second step, exclusions are performed based on the revenues of a company in the relevant FactSet RBICS Level 6 sectors (see Appendix 7.1) and its respective SECTOR BUCKETS. RBICS revenue data is provided by the DATA PROVIDER. Eligible are companies where either:



1. The sum of the last fiscal year revenues in all the RBICS Level 6 sectors in Appendix 7.1 is at least 50% of the total revenues.
2. The sum of the last fiscal year RBICS Level 6 revenues in a SECTOR BUCKET is at least 3% of the aggregate INDEX UNIVERSE revenues in the respective SECTOR BUCKET.

In a third step, further exclusions are performed on the remaining stocks, based on the following rules:

1. The NFD/EBITDA ratio is calculated, where
 - NFD: total debt – cash and short term investments
 - Negative NFD/EBITDA ratios are set to zero
2. Each stock is assigned one SECTOR BUCKET, defined as the SECTOR BUCKET with the highest aggregate RBICS Level 6 revenues.
3. The average (AVG) and standard deviation (SD) of NFD/EBITDA are calculated for all companies in each SECTOR BUCKET.
4. A bucket exclusion threshold (BET) of $AVG + 1.5 * SD$ is calculated for each stock
5. Stocks with $NFD/EBITDA > BET$ are excluded.

In a last step, the stocks that have not been excluded yet are selected based on the following scores, calculated for each stock:

- Bucket-Score:

The bucket score RANK_BUCKET of each company is depending on the SECTOR BUCKET it is assigned.

- %GEOREV: A company's geographic revenues in a country divided by total revenues of the company

Bucket 1: Water

- WATER: Is defined on a country level as: 10 year growth in level of water stress
- BUCKET1: The sum of the products of a company's %GEOREV and WATER over all ELIGIBLE COUNTRIES
- Z_BUCKET1: z-score of BUCKET1
- RANK_BUCKET: ranking (between 1 and 0) of Z_BUCKET1

Bucket 2: Food & Forests

- POP: Is defined on a country level as: 5 year growth in population
- FOREST: Is defined on a country level as: 5 year growth in forest area
- FISH: Is defined on a country level as: 5 year growth in total fisheries production



- LVSK: Is defined on a country level as: 5 year growth in livestock production index
- AGRI: Is defined on a country level as: 5 year growth in agricultural land
- FOOD_FOREST: is defined as POP/average(FOREST, FISH, LVSK, AGRI)
- BUCKET2: The sum of the products of a company's %GEOREV and FOOD_FOREST over all ELIGIBLE COUNTRIES
- Z_BUCKET2: z-score of BUCKET2
- RANK_BUCKET: ranking (between 1 and 0) of Z_BUCKET2

Bucket 3: Energy

- GDP: Is defined on a country level as: 3 year growth in GDP
- BUCKET3: The sum of the products of a company's %GEOREV and GDP over all ELIGIBLE COUNTRIES
- Z_BUCKET3: z-score of BUCKET3
- RANK_BUCKET: ranking (between 1 and 0) of Z_BUCKET3

Bucket 4: Metals & Rare Elements

- MINES: Is defined as FCF/number of mines, data of last fiscal year
- MINES-3: Is defined as FCF/number of mines, data of fiscal year T-3
- BUCKET4: MINES – MINES-3
- Z_BUCKET4: z-score of BUCKET4
- RANK_BUCKET: ranking (between 1 and 0) of Z_BUCKET4

Bucket 5: Urban Physical Space

- URBAN_POP: Is defined on a country level as: 3 year growth in percentage of urban population
- BUCKET5: The sum of the products of a company's %GEOREV and URBAN_POP over all ELIGIBLE COUNTRIES
- Z_BUCKET5: z-score of BUCKET5
- RANK_BUCKET: ranking (between 1 and 0) of Z_BUCKET5

- RDCPX-Score:

- RDCPX: $(R\&D \text{ expenses} + CAPEX)/\text{sales}$ divided by $(SECTOR \text{ BUCKET } R\&D \text{ expenses} + SECTOR \text{ BUCKET } CAPEX)/SECTOR \text{ BUCKET sales}$, data of last fiscal year



- RDCPX-1: $(R\&D \text{ expenses} + CAPEX) / \text{sales}$ divided by $(SECTOR \ BUCKET \ R\&D \ \text{expenses} + SECTOR \ BUCKET \ CAPEX) / SECTOR \ BUCKET \ \text{sales}$, data of fiscal year T-1
- RDCPX-2: $(R\&D \ \text{expenses} + CAPEX) / \text{sales}$ divided by $(SECTOR \ BUCKET \ R\&D \ \text{expenses} + SECTOR \ BUCKET \ CAPEX) / SECTOR \ BUCKET \ \text{sales}$, data of fiscal year T-2
- A_RDCPX: average of (RDCPX, RDCPX-1, RDCPX-2)
- Z_RDCPX: z-score of A_RDCPX
- RANK_RDCPX: ranking (between 1 and 0) of Z_RDCPX
- Rev-Score:
 - SUM_REVT: sum of the revenues in all the RBICS Level 6 sectors in Appendix 7.1, data of last fiscal year
 - SUM_REVT-1: sum of the revenues in all the RBICS Level 6 sectors in Appendix 7.1, data of fiscal year T-1
 - SUM_REVT-2: sum of the revenues in all the RBICS Level 6 sectors in Appendix 7.1, data of fiscal year T-2
 - CAGR_REV: CAGR between SUM_REVT and SUMREVT-2, if not available growth rate between SUM_REVT and SUMREVT-1
 - Z_REV: z-score of CAGR_REV
 - RANK_REV: ranking (between 1 and 0) of Z_REV
- Marg-Score:
 - MARGT: EBIT/sales, data of last fiscal year
 - MARGT+1: estimated EBIT/sales, data of fiscal year T+1
 - MARGT+2: estimated EBIT/sales, data of fiscal year T+2
 - CAGR_MARG: CAGR between MARGT+2 and MARGT divided by the respective bucket average. If MARGT+2 is not available, growth rates between MARGT+1 and MARGT are used. Any company having less than 3 analysts estimating EBIT or sale is not assigned a score.
 - Z_MARG: z-score of CAGR_MARG
 - RANK_MARG: ranking (between 1 and 0) of Z_MARG
- Total-Score:
 - RANK_TOTAL: average of (RANK_RDCPX, RANK_REV, RANK_MARG, RANK_BUCKET)

The 50 stocks with the highest RANK_TOTAL are selected for the final INDEX, where the number of stocks from one bucket is capped at 30% and floored at 10% of the total number of stocks in the



final INDEX. The bucket floor constraint is conditional on enough stocks of a bucket being eligible after exclusions. In case of equal ranks, the security with the higher AVERAGE DAILY VALUE TRADED is assigned the higher rank. The total number of stocks (N) can be smaller than 50, if less than 50 stocks are eligible for the final INDEX. In case less than 40 stocks are eligible, the constraints are relaxed in the following order, until at least 40 stocks are selected for the final INDEX:

1. Remove the third step, the exclusion based on NFD/EBITDA ratio.
2. Decrease the first constraint in the first step, the exclusion based on the sum of the last fiscal year revenues in all the RBICS Level 6 sectors in Appendix 7.1, starting from 50%.

The selection of the INDEX COMPONENTS is fully rule-based and the INDEX ADMINISTRATOR cannot make any discretionary decision.

2.3. WEIGHTING OF THE INDEX COMPONENTS

On each SELECTION DAY each INDEX COMPONENT is assigned a weight based on modified FREE FLOAT MARKET CAPITALIZATION. To do so, the FREE FLOAT MARKET CAPITALIZATION weight of each INDEX COMPONENT is weighted by the share of SUM_REVT of total revenues of the company. Further, a single weight cap of 5% and a single weight floor of 0.3% are applied.

In a next step, an optimization is performed to achieve equal risk contribution of the portfolios buckets, defined as the TARGET BUCKET WEIGHTS, subject to the following constraints:

- Individual weights are capped at 5% and floored at 0.3%
- HHI is capped at $(1/N)*1.5$



3. REBALANCE

3.1. ORDINARY REBALANCE

In order to reflect the new selection of the INDEX COMPONENTS determined on the SELECTION DAY (in accordance with Section 2.1 and 2.2) the INDEX is adjusted on the REBALANCE DAY after CLOSE OF BUSINESS.

This is carried out by implementing the shares as determined on the FIXING DAY based on the weights calculated on the SELECTION DAY.

For more information on the rebalance procedure please refer to the Equity Index Methodology, which is incorporated by reference and available on the Solactive website: <https://www.solactive.com/documents/equity-index-methodology/>.

SOLACTIVE will publish any changes made to the INDEX COMPONENTS with sufficient notice before the REBALANCE DAY on the SOLACTIVE website under the section "Announcement", which is available at <https://www.solactive.com/news/announcements/>

3.2. EXTRAORDINARY REBALANCE

The INDEX is not rebalanced extraordinarily.



4. CALCULATION OF THE INDEX

4.1. INDEX FORMULA

The INDEX is calculated as a price return, net total return and gross total return Index.

The calculation is performed according to the Equity Index Methodology, which is available on the SOLACTIVE website: <https://www.solactive.com/documents/equity-index-methodology/>. The standard index formula stipulates that the level of the INDEX changes based on the change of the prices of its INDEX COMPONENTS taking into account their weight in the INDEX and any currency conversion in case the price of an INDEX the INDEX CURRENCY.

Any dividends or other distributions are reinvested back into the INDEX COMPONENT paying the dividend or other distribution opening of the effective date (the so called ex-date) of the payment of such dividend or other distribution.

A more detailed description of the mechanics of the index calculation formula can be found in the Equity Index Methodology under Section 1.2.

For the construction of the PR, NTR and GTR versions a management fee of 0.30% per annum is deducted on each INDEX CALCULATION DAY. The management fee will be applied in compliance with the Solactive Equity Index Methodology, which is incorporated by reference and available on the SOLACTIVE website: <https://www.solactive.com/documents/equity-index-methodology/>.

4.2. ACCURACY

The level of the INDEX will be rounded to two decimal places. TRADING PRICES and foreign exchange rates will be rounded to six decimal places.

4.3. ADJUSTMENTS

Under certain circumstances, an adjustment of the INDEX may be necessary between two regular REBALANCE DAYS. Such adjustment has to be made if a corporate action (as specified in Section 4.4 below) in relation of an INDEX COMPONENT occurs. Such adjustment may have to be done in relation to an INDEX COMPONENT and/or may also affect the number of INDEX COMPONENTS and/or the weighting of certain INDEX COMPONENTS and will be made in compliance with the Solactive Equity Index Methodology, which is incorporated by reference and available on the SOLACTIVE website: <https://www.solactive.com/documents/equity-index-methodology/>.



SOLACTIVE will announce the INDEX adjustment giving a notice period of at least two TRADING DAYS (with respect to the affected INDEX COMPONENT) on the SOLACTIVE website under the Section “Announcements”, which is available at <https://www.solactive.com/news/announcements/>. The INDEX adjustments will be implemented on the effective day specified in the respective notice.

4.4. CORPORATE ACTIONS

As part of the INDEX maintenance SOLACTIVE will consider various events – also referred to as corporate actions – which result in an adjustment to the INDEX between two regular REBALANCE DAYS. Such events have a material impact on the price, weighting or overall integrity of INDEX COMPONENTS. Therefore, they need to be accounted for in the calculation of the INDEX. Corporate actions will be implemented from the cum-day to the ex-day of the corporate action, so that the adjustment to the INDEX coincides with the occurrence of the price effect of the respective corporate action.

Adjustments to the INDEX to account for corporate actions will be made in compliance with the Equity Index Methodology, which is available on the SOLACTIVE website: <https://www.solactive.com/documents/equity-index-methodology/>. This document contains for each corporate action a brief definition and specifies the relevant adjustment to the INDEX variables.

While SOLACTIVE aims at creating and maintaining its methodology for treatment of corporate actions as generic and transparent as possible and in line with regulatory requirements, it retains the right in accordance with the Equity Index Methodology to deviate from these standard procedures in case of any unusual or complex corporate action or if such a deviation is made to preserve the comparability and representativeness of the INDEX over time.

SOLACTIVE considers following, but not conclusive, list of corporate actions as relevant for INDEX maintenance:

- > Cash Distributions (e.g. payment of a dividend)
- > Stock distributions (e.g. payment of a dividend in form of additional shares)
- > Stock distributions of another company (e.g. payment of a dividend in form of additional shares of another company (e.g. of a subsidiary))
- > Share splits (company's present shares are divided and therefore multiplied by a given factor)
- > Reverse splits (company's present shares are effectively merged)
- > Capital increases (such as issuing additional shares)
- > Share repurchases (a company offer its shareholders the option to sell their shares to a fixed price)
- > Spin-offs (the company splits its business activities into two or more entities and distributes new equity shares in the created entities to the shareholders of the former entity)



- > Mergers & Acquisitions (transaction in which the ownership of a company (or other business organizations) are transferred or consolidated with other entities, e.g. fusion of two or more separate companies into one entity)
- > Delistings (company's shares are no longer publicly traded at a stock exchange)
- > Nationalization of a company (effective control of a legal entity is taken over by a state)
- > Insolvency

4.5. RECALCULATION

SOLACTIVE makes the greatest possible efforts to accurately calculate and maintain its indices. However, errors in the determination process may occur from time to time for variety reasons (internal or external) and therefore, cannot be completely ruled out. SOLACTIVE endeavors to correct all errors that have been identified within a reasonable period of time. The understanding of "a reasonable period of time" as well as the general measures to be taken are generally depending on the underlying and is specified in the Solactive Correction Policy, which is incorporated by reference and available on the SOLACTIVE website: <https://www.solactive.com/documents/correction-policy/>.

4.6. MARKET DISRUPTION

In periods of market stress SOLACTIVE calculates its indices following predefined and exhaustive arrangements as described in the Solactive Disruption Policy, which is incorporated by reference and available on the SOLACTIVE website: <https://www.solactive.com/documents/disruption-policy/>. Such market stress can arise due to a variety of reasons, but generally results in inaccurate or delayed prices for one or more INDEX COMPONENTS. The determination of the INDEX may be limited or impaired at times of illiquid or fragmented markets and market stress.



5. MISCELLANEOUS

5.1. DISCRETION

Any discretion which may need to be exercised in relation to the determination of the INDEX (for example the determination of the INDEX UNIVERSE (if applicable), the selection of the INDEX COMPONENTS (if applicable) or any other relevant decisions in relation to the INDEX) shall be made in accordance with strict rules regarding the exercise of discretion or expert judgement.

5.2. METHODOLOGY REVIEW

The methodology of the INDEX is subject to regular review, at least annually. In case a need of a change of the methodology has been identified within such review (e.g. if the underlying market or economic reality has changed since the launch of the INDEX, i.e. if the present methodology is based on obsolete assumptions and factors and no longer reflects the reality as accurately, reliably and appropriately as before), such change will be made in accordance with the Solactive Methodology Policy, which is incorporated by reference and available on the SOLACTIVE website: <https://www.solactive.com/documents/methodology-policy/>.

Such change in the methodology will be announced on the SOLACTIVE website under the Section "[Announcement](https://www.solactive.com/news/announcements/)", which is available at <https://www.solactive.com/news/announcements/>. The date of the last amendment of this INDEX is contained in this GUIDELINE.

5.3. CHANGES IN CALCULATION METHOD

The application by the INDEX ADMINISTRATOR of the method described in this document is final and binding. The INDEX ADMINISTRATOR shall apply the method described above for the composition and calculation of the INDEX. However, it cannot be excluded that the market environment, supervisory, legal and financial or tax reasons may require changes to be made to this method. The INDEX ADMINISTRATOR may also make changes to the terms and conditions of the INDEX and the method applied to calculate the INDEX that it deems to be necessary and desirable in order to prevent obvious or demonstrable error or to remedy, correct or supplement incorrect terms and conditions. The INDEX ADMINISTRATOR is not obliged to provide information on any such modifications or changes. Despite the modifications and changes, the INDEX ADMINISTRATOR will take the appropriate steps to ensure a calculation method is applied that is consistent with the method described above.



5.4. TERMINATION

SOLACTIVE makes the greatest possible efforts to ensure the resilience and continued integrity of its indices over time. Where necessary, SOLACTIVE follows a clearly defined and transparent procedure to adapt Index methodologies to changing underlying markets (see Section 5.2 "Methodology Review") in order to maintain continued reliability and comparability of the indices. Nevertheless, if no other options are available the orderly cessation of the INDEX may be indicated. This is usually the case when the underlying market or economic reality, which an index is set to measure or to reflect, changes substantially and in a way not foreseeable at the time of inception of the index, the index rules, and particularly the selection criteria, can no longer be applied coherently or the index is no longer used as the underlying value for financial instruments, investment funds and financial contracts.

SOLACTIVE has established and maintains clear guidelines on how to identify situations in which the cessation of an index is unavoidable, how stakeholders are to be informed and consulted and the procedures to be followed for a termination or the transition to an alternative index. Details are specified in the Solactive Termination Policy, which is incorporated by reference and available on the SOLACTIVE website: <https://www.solactive.com/documents/termination-policy/>.

5.5. OVERSIGHT

An oversight committee composed of staff from SOLACTIVE and its subsidiaries (the "**OVERSIGHT COMMITTEE**") is responsible for decisions regarding any amendments to the rules of the INDEX. Any such amendment, which may result in an amendment of the GUIDELINE, must be submitted to the OVERSIGHT COMMITTEE for prior approval and will be made in compliance with the Methodology Policy, which is available on the SOLACTIVE website: <https://www.solactive.com/documents/methodology-policy/>.



6. DEFINITIONS

“AVERAGE DAILY VALUE TRADED” means, in respect of an INDEX COMPONENT, the sum of DAILY VALUE TRADED over the specified period divided by the number of TRADING DAYS that fall in the specified period.

“BENCHMARK REGULATION” shall have the meaning as defined in Section “Introduction”.

“BMR” shall have the meaning as defined in Section “Introduction”.

“BUSINESS DAY” is a day on which the TARGET2 system is open for general business.

“CALCULATION DAY” is every weekday from Monday to Friday. A day on which the TARGET2 system is not open for general business is not a CALCULATION DAY.

“CLOSE OF BUSINESS” is the calculation time of the closing level of the INDEX as outlined in Section 1.4.

The **“CLOSING PRICE”** in respect of an INDEX COMPONENT and a TRADING DAY is a security's final regular-hours TRADING PRICE published by the EXCHANGE and determined in accordance with the EXCHANGE regulations. If the EXCHANGE has no or has not published a CLOSING PRICE in accordance with the EXCHANGE rules for an INDEX COMPONENT, the last TRADING PRICE will be used.

“DAILY VALUE TRADED” means, in respect of an INDEX COMPONENT and a TRADING DAY, the product of (i) the CLOSING PRICE of such INDEX COMPONENT and (ii) the volume traded (measured as a number of shares) of such INDEX COMPONENT on the EXCHANGE during such TRADING DAY.

“DATA PROVIDER” is FactSet. For more information, please visit: <https://www.factset.com/>.

“ELIGIBLE COUNTRIES” see Appendix 7.2.

“ELIGIBLE REBALANCE DAY” is each day on which the TARGET2 system is open for general business.

“EXCHANGE” is with respect to the INDEX and every INDEX COMPONENT, the respective exchange where the INDEX COMPONENT has its listing as determined in accordance with the rules in Section 2.

“FIXING DAY” is the respective SELECTION DAY.

The **“FREE FLOAT”** is with regard to each of the securities fulfilling the INDEX COMPONENT REQUIREMENTS on a SELECTION DAY the share class-specific fraction of the total number of shares of such share class issued that are available for trading by market participants and not locked-in by long term holders, as sourced from data vendors.

The **“FREE FLOAT MARKET CAPITALIZATION”** is with regard to each of the securities fulfilling the INDEX COMPONENT REQUIREMENTS on a SELECTION DAY the share class-specific free float market capitalization. It is calculated as the multiplication of the shares outstanding in FREE FLOAT (as sourced from data vendors) with the CLOSING PRICE of the share class as of the respective SELECTION DAY.

“GBS INDEX COMPONENT” is each security reflected in the GBS Index specified in Section 2.1.

“GUIDELINE” shall have the meaning as defined in Section “Introduction”.

“HHI” is the Herfindahl-Hirschman-Index (HHI), where



$$HHI = \sum_{i=1}^N x_i^2.$$

“**INDEX**” shall have the meaning as defined in Section “Introduction”.

“**INDEX ADMINISTRATOR**” shall have the meaning as defined in Section “Introduction”.

“**INDEX COMPONENT**” is each security reflected in the INDEX.

“**INDEX COMPONENT REQUIREMENTS**” shall have the meaning as defined in Section 2.2.

“**INDEX CURRENCY**” is the currency specified in the column “Currency” in the table in Section 1.2.

“**INDEX UNIVERSE REQUIREMENTS**” shall have the meaning as defined in Section 2.1.

“**INDEX UNIVERSE**” is the sum of all financial instruments which fulfill the INDEX UNIVERSE REQUIREMENTS.

“**LIVE DATE**” shall have the meaning as defined in Section 1.3.

“**OVERSIGHT COMMITTEE**” shall have the meaning as defined in Section 5.5.

“**REBALANCE DAY**” is 16 BUSINESS DAYS after SELECTION DAY for the annual selection in April. If the determined REBALANCE DAY is not an ELIGIBLE REBALANCE DAY, the REBALANCE DAY will be the immediately following ELIGIBLE REBALANCE DAY.

“**SECTOR BUCKET**” see Appendix 7.1.

“**SELECTION DAY**” is the 15th of April. If that day is not a BUSINESS DAY, the SELECTION DAY will be the immediately following BUSINESS DAY.

“**SOLACTIVE**” shall have the meaning as defined in Section “Introduction”.

“**START DATE**” shall have the meaning as defined in Section 1.3.

“**TARGET BUCKETS WEIGHTS**” were determined using realized historical volatility at the LIVE DATE and are listed in Appendix 7.3.

“**TRADING DAY**” is with respect to an INDEX COMPONENT included in the INDEX at the REBALANCE DAY and every INDEX COMPONENT included in the INDEX at the CALCULATION DAY immediately following the REBALANCE DAY (for clarification: this provision is intended to capture the TRADING DAYS for the securities to be included in the INDEX as new INDEX COMPONENTS with close of trading on the relevant EXCHANGE on the REBALANCE DAY) a day on which the relevant EXCHANGE is open for trading (or a day that would have been such a day if a market disruption had not occurred), excluding days on which trading may be ceased prior to the scheduled EXCHANGE closing time and days on which the EXCHANGE is open for a scheduled shortened period. The INDEX ADMINISTRATOR is ultimately responsible as to whether a certain day is a TRADING DAY.

The “**TRADING PRICE**” in respect of an INDEX COMPONENT and a TRADING DAY is the most recent published price at which the INDEX COMPONENT was traded on the respective EXCHANGE.



7. APPENDIX

7.1 SECTORS

Sector Bucket	FactSet RBICS Level 6 Sector Name*
Water	Wastewater Treatment Services
Water	Water Treatment Agents Manufacturing
Water	Pipes and Pipe Fittings Manufacturing
Water	Utilities Pipes and Pipe Fittings Manufacturing
Water	Americas Water Utilities
Water	Asia/Pacific Water Utilities
Water	Europe, Middle East and Africa Water Utilities
Water	United States Water Utilities
Water	Multi-National Water Utilities
Water	Other Waste Services
Water	Liquid and Water Purification/Filtration Products
Water	Utility Meter Manufacturing
Water	Air, Liquid and Gas Control Equipment Products
Water	Compressor and Pumping Equipment Manufacturing
Water	Other Fluid Power and Control Equipment Products
Water	Fabricated Pipes and Pipe Fittings Products
Water	Bottled Water Manufacturing
Water	Valves and Fluid Control Products
Water	Wastewater Residual Management
Food & Forests	Environmental Services
Food & Forests	Soil Remediation
Food & Forests	Recycling Services
Food & Forests	Pulp and Paper Additives Manufacturing
Food & Forests	Engineered Wood Products Manufacturing
Food & Forests	Lumber Processing and Sawmill Products
Food & Forests	Oriented Strand Board (OSB) Manufacturing
Food & Forests	Other Construction Wood Products Makers
Food & Forests	Plywood, Hardwood and Softwood Veneer Products
Food & Forests	Diversified Forestry and Paper Product Makers
Food & Forests	Logging and Timber Property Management
Food & Forests	Diversified Paper and Paper Products Manufacturing
Food & Forests	Printing and Stationary Paper Products
Food & Forests	Diversified Pulp and Paper Mills
Food & Forests	Paper Mills
Food & Forests	Pulp Mills
Food & Forests	Folding Carton Manufacturing
Food & Forests	Other Paper Packaging Products Manufacturing
Food & Forests	Diversified Seafood Production
Food & Forests	Fish Farming and Hatcheries
Food & Forests	Ocean Fishing
Food & Forests	Citrus Fruit Farming
Food & Forests	Mixed Fruit, Nut and Vegetable Farming
Food & Forests	Non-Citrus Fruit Farming
Food & Forests	Nut Farming
Food & Forests	Vegetable Farming



Food & Forests	Diversified Crop Production
Food & Forests	Nursery and Tree Production
Food & Forests	Other Crop Farming
Food & Forests	Sugarcane Farming
Food & Forests	Beef, Pork and Other Meats Production
Food & Forests	Meat and Seafood Production
Food & Forests	Poultry Products Processors
Food & Forests	Seafood Processors
Food & Forests	Veterinary Diagnostics
Food & Forests	Veterinary Pharmaceuticals
Food & Forests	Veterinary Services
Food & Forests	Agriculture and Farming Machinery Manufacturing
Food & Forests	Cattle Ranching and Farming
Food & Forests	Chicken Egg Production
Food & Forests	Chicken Meat Production
Food & Forests	General Animal Production
Food & Forests	Hog and Pig Farming
Food & Forests	Poultry and Egg Production
Food & Forests	Diversified Agriculture Production
Food & Forests	Crop Processing
Food & Forests	Other Agricultural Support Activity Providers
Food & Forests	General Support Activity Providers for Agriculture
Food & Forests	Pest Control Services
Food & Forests	Mixed and Other Fertilizers Makers
Food & Forests	Multi-Type Fertilizers Manufacturing
Food & Forests	Nitrogenous Fertilizer Manufacturing
Food & Forests	Phosphate Fertilizer Manufacturing
Food & Forests	Potassium Fertilizer Manufacturing
Food & Forests	Biotechnology and Genomics (GMO/Hybrids) Products
Food & Forests	Mixed Type Agrochemicals Manufacturing
Food & Forests	Other Agrochemicals Manufacturing
Food & Forests	Pesticide Manufacturing
Food & Forests	Animal Feed Manufacturing
Food & Forests	Dairy Products Production
Food & Forests	Corn Farming
Food & Forests	Other Grain Farming
Food & Forests	Palm Farming
Food & Forests	Soybean Farming
Food & Forests	Diversified Oilseed and Grain Farming
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Energy	Environmental Consulting
Energy	Process Plants, Utilities and Energy Construction
Energy	Multinational Transmission, Dist., and Storage
Energy	United States Transmission, Dist., and Storage
Energy	Carbon Capture Services and Technologies
Energy	Carbon Transportation and Sequestration Services
Energy	Greenhouse Gas Emission Services
Energy	Waste-to-Energy Services
Energy	Emission Control Services and Technologies
Energy	Asia/Pacific Natural Gas Pipeline and Storage
Energy	Europe Natural Gas Pipeline and Storage
Energy	Middle East/Africa Natural Gas Pipeline and Stor.
Energy	Latin America Natural Gas Pipeline and Storage
Energy	US Natural Gas Pipeline and Storage



Energy	Canada Natural Gas Pipeline and Storage
Energy	Asia/Pacific Crude Oil Liquid Pipeline and Stor.
Energy	Europe Crude Oil Liquid Pipeline and Stor.
Energy	Latin America Crude Oil Liquid Pipeline and Stor.
Energy	Middle East/Africa Crude Oil Liquid Pipeline and Stor.
Energy	US and Canada Crude Oil Liquid Pipeline and Stor.
Energy	US and Canada Petroleum Storage and Transport
Energy	Latin America Petroleum Storage and Transport
Energy	Asia/Pacific Petroleum Storage and Transport
Energy	Europe Petroleum Storage and Transport
Energy	Middle East/Africa Petroleum Storage & Transport
Energy	Hydrogen Fuel Manufacturing
Energy	Hydroelectric Power Generation Equipment Providers
Energy	Heavy-Duty Industrial Batteries Manufacturing
Energy	Military Batteries Manufacturing
Energy	Electric Vehicle Batteries Manufacturing
Energy	Battery Charging Equipment Manufacturing
Energy	Mixed Heavy-Duty and High-End Batteries Makers
Energy	Crude Oil Transportation
Energy	Liquid Petroleum and Other Liquids Transportation
Energy	LNG (Liquid Natural Gas) Transportation
Energy	Multi-Type Petroleum Transportation
Energy	Refined Petroleum and Other Liquid Transportation
Energy	Natural Gas Compression Equipment
Energy	Oil Country Tubular Goods (OCTG)
Energy	Oil and Gas Pumping Equipment
Energy	Other Oil and Gas Support Activities
Energy	Petroleum Storage and Transportation
Energy	International Natural Gas Pipeline and Storage
Energy	Other Pipeline and Energy Storage Services
Energy	Crude Oil Liquid Pipeline and Storage
Energy	Petroleum Liquid Pipeline and Storage
Energy	Refined Petroleum Liquid Pipeline and Storage
Energy	Diversified Power Generation Equipment Makers
Energy	Power Generation/Support Products Manufacturing
Energy	Power Transmission and Distribution Products
Energy	Fuel Cell Equipment and Technology Providers
Energy	Mixed Renewable Energy Generation Manufacturing
Energy	Smart Grid Technology and Smart Meter Products
Energy	Other Environmental Control Machine Manufacturing
Energy	Biodiesel Fuel Manufacturing
Energy	Ethanol Fuel Manufacturing
Energy	Multi-Type Organic and Petrochemicals Makers
Energy	Other Alternative Fuel Manufacturers
Energy	Fuel and Lubricant Additive Manufacturing
Energy	Utilities Industry Software
Energy	Oil and Gas Drilling Equipment
Energy	Oil and Gas Well Servicing
Energy	US and Canada Natural Gas Pipeline and Storage
Energy	Photovoltaic and Solar Cells and Systems Providers
Energy	Wind Energy Equipment Manufacturing
Energy	Gasification Alternative Fuel Manufacturing
Energy	Canada National Fossil Fuel Exploration/Production



Energy	Latin America Fossil Fuel Exploration/Production
Energy	Pan-Americas Fossil Fuel Exploration/Production
Energy	Eastern Region Fossil Fuel Exploration/Production
Energy	Other US Western Oil/Gas Exploration/Production
Energy	Pan-US Fossil Fuel Exploration/Production
Energy	US Rockies Fossil Fuel Exploration/Production
Energy	Gulf Coast Fossil Fuel Exploration/Production
Energy	Gulf of Mexico Fossil Fuel Exploration/Production
Energy	Mid-Continent Fossil Fuel Exploration/Production
Energy	Other US South Fossil Fuel Exploration/Production
Energy	Permian Basin Fossil Fuel Exploration/Production
Energy	Australia Fossil Fuel Exploration/Production
Energy	China Fossil Fuel Exploration/Production
Energy	Other Asia Fossil Fuel Exploration/Production
Energy	Pan-Asia Fossil Fuel Exploration/Production
Energy	North Sea Fossil Fuel Exploration/Production
Energy	Pan-Europe Fossil Fuel Exploration/Production
Energy	MENA Fossil Fuel Exploration/Production
Energy	Multinational Fossil Fuel Exploration/Production
Energy	Russia/CIS/FSU Fossil Fuel Exploration/Production
Energy	Sub-Saharan Fossil Fuel Exploration/Production
Energy	Integrated Oil and Gas Exploration and Production
Energy	Canada Other Fossil Fuel Exploration/Production
Energy	Rest of Europe Fossil Fuel Exploration/Production
Energy	Diverse Oil and Gas Field Equipment Manufacturing
Energy	Oil and Gas Geophysical Equipment
Energy	Oil and Gas Wellhead and Pressure Control Products
Energy	Offshore Oil and Gas Well Drilling
Energy	Onshore and Offshore Oil and Gas Well Drilling
Energy	Onshore Oil and Gas Well Drilling
Energy	General Oil and Gas Operations Support Activities
Energy	Multi-Type Support for Oil and Gas Operations
Energy	Oil and Gas Engineering and Construction
Energy	Oil and Gas Geophysical Services
Energy	Uranium Mining
Energy	Uranium Fuel Manufacturing
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Metals & Rare Elements	Mining and Excavation Equipment Manufacturing
Metals & Rare Elements	Carbon and Graphite Products Manufacturing
Metals & Rare Elements	Metal Processing and Metal Service Centers
Metals & Rare Elements	Other Metal Processing and Recycling Providers
Metals & Rare Elements	Nickel Ore Mining
Metals & Rare Elements	Other Non-Ferrous Metals Ore Mining
Metals & Rare Elements	Mixed Non-Ferrous and Ferrous Metals Ore Mining
Metals & Rare Elements	Rare Earth Elements Ore Mining
Metals & Rare Elements	Radium and Vanadium Mining
Metals & Rare Elements	Lithium Compounds Manufacturing
Metals & Rare Elements	Other Non-Ferrous Metal Products Manufacturing
Metals & Rare Elements	Cobalt Ore Mining
Metals & Rare Elements	Lithium Ore Mining
Metals & Rare Elements	Tungsten Ore Mining
Metals & Rare Elements	Oil and Gas and Mining Additive Manufacturing
Metals & Rare Elements	Metal Recycling Providers
Metals & Rare Elements	Diversified Metal Ore Mining



Metals & Rare Elements	Copper Ore Mining
Metals & Rare Elements	Platinum and Palladium Metals Ore Mining
Metals & Rare Elements	Copper-Derived Structural Shape Manufacturing
Metals & Rare Elements	Electronic Waste Services
Urban Physical Space	Residential Property Owners
Urban Physical Space	Apartment Equity REITs
Urban Physical Space	Healthcare and Life Sciences Equity REITs
Urban Physical Space	Industrial and Warehouse Equity REITs
Urban Physical Space	Colocation and Data Center Services
Urban Physical Space	Residential Real Estate Services and Brokerage
Urban Physical Space	Real Estate Classifieds and Directories Sites

7.2 COUNTRIES

Australia	Malaysia
Austria	Mexico
Belarus	Netherlands
Belgium	New Zealand
Brazil	Norway
Bulgaria	Oman
Canada	Panama
Chile	Peru
China*	Poland
Costa Rica	Portugal
Croatia	Romania
Czech Republic	Russia
Denmark	Saudi Arabia
Dominican Republic	Serbia
Finland	Singapore
France	Slovakia
Germany	South Korea
Greece	Spain
Hong Kong	Sweden
Hungary	Switzerland
Ireland	Thailand
Israel	Turkey
Italy	Turkmenistan
Japan	United Arab Emirates
Kazakhstan	United Kingdom
Kuwait	United States
Lebanon	Uruguay

*includes Taiwan and Macau if available

7.3 BUCKET WEIGHTS

Sector Bucket	Target Bucket Weight
Water	19%
Food & Forests	28%
Energy	15%
Metals & Rare Elements	15%
Urban Physical Space	23%

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