INDEX GUIDELINE

SOLACTIVE EMERGING MARKET MINIMUM VARIANCE ESG INDEX

Version 1.0

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INTRODUCTION

This document (the "GUIDELINE") is to be used as a guideline with regard to the composition, calculation and maintenance of the Solactive Emerging Market Minimum Variance ESG 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.

1. INDEX SPECIFICATIONS

1.1. SCOPE OF THE INDEX

Category	Description
Asset Class	Equity
Strategy	The scope of the Index is to deliver the performance of an ESG best-in-class filtered basket of liquid stocks from the Solactive GBS Emerging Markets Large & Mid Cap Index ("The Benchmark"), weighted in such a way as to minimize the volatility of the portfolio while reducing the carbon footprint.
Regional Allocation	Emerging Markets
Rebalancing Fee	NA
Rebalancing Frequency	Semi-annually

1.2. IDENTIFIERS AND PUBLICATION

The INDEX is published under the following identifiers:

Name	ISIN	Currency	Type	RIC	BBG ticker
Solactive Emerging Market Minimum Variance ESG Index PR	DE000SLA9L27	USD	PR	.SOEMEMVP	
Solactive Emerging Market Minimum Variance ESG Index NTR	DE000SLA9L35	USD	NTR	.SOEMEMVN	SOEMEMVN
Solactive Emerging Market Minimum Variance ESG Index TR	DE000SLA9L43	USD	GTR	.SOEMEMVT	

*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 14/04/2017, the START DATE, is 100. Historical values from the 18/10/2019, 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 9:00 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 Reuters 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 4pm London time WM Fixing quoted by Reuters. If there is no 4pm London time WM Fixing for the relevant CALCULATION DAY, the last available 4pm London 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 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 member of the Solactive GBS Emerging Markets Large & Mid Cap Index (ISIN: DE000SLA75V2) on the SELECTION DAY, as published on the SOLACTIVE website: https://www.solactive.com.

- Any securities which are known to be delisted until the next day after the Rebalancing Day are to be excluded from the INDEX UNIVERSE.

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"):

1. Liquid Universe

   The Liquid Universe consists of those securities which fulfill the following two steps.

   a. *Missing Data Filter*

   First, we select those stocks whose recent price history does not exhibit large non trading periods, which could bias the liquidity estimation. For this purpose, a missing data filter is designed to perform the following actions:

   - For each stock, count the Number of Non-Trading occurrence (NNT) over the past 125 Business Days

   - Stocks for whose NNT >= 25 are discarded.

b. ADV estimation and liquidity selection

Liquidity is estimated for each stock, using most recent transaction volume data. Average Daily Value Traded (ADV) is calculated as a simple average of daily transaction value series over the past 125 Business Days. Observations with missing volume are discarded from the mean calculation. More precisely we define, for each stock k:

$$ADV_T^k = \frac{1}{TD_T^k} \sum_{t-T-TV+1}^{T} V_t^k * P_t^k * 1_{Volume\ is\ not\ missing} * FX_t^k$$

Where:

V_t^k is the volume of stock k for Business Day t

P_t^k its closing price in local currency for stock k and Business Day t

TD_T^k – number of Business Days with non-missing volume data (measured as number of shares):

$$TD_T^k = \sum_{t-T-125+1}^{T} 1_{Volume\ is\ not\ missing}$$

FX_t^k is the exchange rate of the local currency of stock k to USD 4pm WMCO spot rate on Business Day t

The stocks which have already passed the Missing Data Filter are then ranked according to their ADV in descending order and only the first 500 with the highest ADV are selected and included in the Liquid Universe.

2. ESG Universe

The ESG Universe comprises all stocks from the Index Universe, which fulfill the following criteria. The Liquidity criteria applied in Section 2.2.1 are not considered in the application of the below.

a. Coverage Filter

We consider eligible all stocks in the Index Universe that are covered by Sustainalytics (the "DATA PROVIDER"). We define that a stock is covered by Sustainalytics if there exist an ESG as well as an E, S and G- Scores provided by the DATA PROVIDER. Since ESG score updates and Index rebalancings may not be synchronous, we assign the last available score to each stock.

b. ESG Best-In-Class Filter

Each stock that passes the filter in Section 2.2.2(a) is clustered into its Peer Group, based on the Peer Group classification as provided by Sustainalytics. Within each Peer Group, stocks are sorted according their ESG scores in decreasing order. Within each Peer Group, we determine the **70th**– percentile ESG score, i.e. the largest ESG score such that the cumulative sum of assigned weights 1/N of stocks whose ESG score it is equal or greater than **70%**. The list of Peer Groups is given in Appendix 1.

c. Controversy Filter

For each stock in the selection which passed the filter in Section 2.2.2(b), Sustainalytics computes a Controversy Category as follows:

$$CS = \min (\{G.1.5., G.2.13, G.3.4, E.1.12, E.2.2, E.3.2, S.1.7, S.2.3, S.3.3, S.4.3\})$$

The controversy score CS is transformed into a Controversy Category CC as follows:

$$CC = \begin{cases} 0 \text{ if} & CS = 100 \\ 1 \text{ if } 81 \leq CS \leq 99 \\ 2 \text{ if } 51 \leq CS \leq 80 \\ 3 \text{ if } 21 \leq CS \leq 50 \\ 4 \text{ if } 1 \leq CS \leq 20 \\ 5 \text{ if} & CS = 0 \end{cases}$$

Stocks with CC >= 4 are excluded from the selection. The Controversy Category is provided by Sustainalytics.

d. Indian ADR Filter

From the securities which passed the filter in Section 2.2.2(c), we remove any securities considered Indian (according to the Solactive Country Classification as explained in the methodology of the Solactive GBS) which do not have an ADR.

The remaining securities represent the ESG Universe.

3. Investable Universe

The Investable Universe is determined by the intersection of the Liquid universe as in Section 2.2.1 and the ESG Universe from Section 2.2.2. From the Index Review as of September 2017 onwards, the Investable Universe contains also all the stocks that were also included in the live index calculation and are also included in the newly selected ESG Universe to reduce turnover.

The Investable Universe is then:

$$InvestableUniverse = \{ESG_{Current\ Review} \cap Liquidity_{Current\ Review}\} \cup \{ESG_{Current\ Review} \cap Index_{Live}\}$$

4. Missing Data Filter

a. Missing Carbon Data

From the pool of securities in Section 2.2.3 we exclude all stocks that are not covered by Sustainalytics Carbon Research. (i.e. for which there is no Carbon Total Emission nor Revenue data. Since Carbon Total Emissions and Revenue data updates and Index rebalancings may not be synchronous, we assign the last available score to each stock which made it into this step.

b. Missing Price Data

From the pool of securities in Section 2.2.4(a) we exclude also all stocks whose recent price history exhibits large non trading periods, which could bias the volatility estimation. We exclude all stocks for which we observe more than 50 of missing price over the previous 500 Business Days ending on the Selection Date:

- For each stock, count the Number of Non-Trading occurrence (NNT) over the past 500 Business Days.
- Stocks for whose NNT >=50 are discarded.

c. Zero Return

From the pool of securities in Section 2.2.4(b) we exclude all stocks for which we observe more than 200 Business Days with stale price (measured by zero return) over the previous 500 Business Days ending on the Selection Date:

- For each stock, count the Number of Flat-Price occurrence (FP) over the past 500 Business Days.
- Stocks for whose FP >= 200 are discarded.

5. Eligible Universe Construction

The Eligible Universe is constructed by considering all securities which remain after the filter applied in Section 2.2.4(c) and applying a trading suspension check. The treatment of suspended securities will differ depending on whether these are or are not included in the live index composition.

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- If a security is suspended from trading on the Selection Day, and not already included in the live index, it will be removed from the Eligible Universe and now allowed to enter the final index composition.

- If a security is suspended from trading on the Selection Day, but already included in the live index, the weight of this security will be fixed to its weight on the Selection Day and the optimizer will not be allowed to assign any other weight to the respective security.

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 an optimization procedure, aimed at minimizing the index volatility under certain constraints as outlined below:

1. First Optimization Objective

The function to be minimized, under constraints, is the (squared) Volatility VOL:

$$\text{VOL}^2 = \sum_{i=1}^{k} \sum_{j=1}^{k} w_i \text{ COV}_{ij} \text{ } w_j$$

where

i, j represents each stock in the Eligible Universe of k stocks.

COV_{ij} - represents the covariance matrix between i and j

VOL^2 - represents the portfolio volatility

2. Covariance Matrix Estimation Details

For all the stocks in the Eligible Universe we estimate the covariance as:

$$\text{COV}_T^{i,j} = 10^4 * \frac{1}{TS - 1} \sum_{t=T-TS+1}^{T} (r_t^i - \bar{r}^i)(r_t^j - \bar{r}^j)$$

The covariance matrix is estimated on arithmetic 3-days returns in USD as follows:

$$r_t^i = \frac{TR_t^i * FX_t}{TR_{t-3}^i * FX_{t-3}} - 1$$

Where:

TR - the total return of the stock i in local currency on Business Day t

FX_t - the exchange rate of the local currency to USD 4pm WMCO spot rate on Business Day t

T   - the Selection Date

TS   - the covariance estimation period, 500

r_t^i - the total return on stock i in USD on Business Day t

3. Optimization: constraints

Optimization in Section 2.3.1 is performed under the following list of constraints in order to manage Index diversification, and a targeted final Carbon Footprint improvement.

- *Budget*

  The Index is fully invested: $\sum_{i=1}^{k} w_i = 1$

- *Minimum Weight*

  The Index is not allowed to short sell stocks: $w_i \geq 0, \; 1 \leq i \leq k$

- *Maximum weight*

  Maximum weight par stock is set at 3.5%: $w_i \leq 3.5\%, \; 1 \leq i \leq k$

- *Maximum weight per sector*

  Maximal sector exposure is bounded at 20%: $\sum_{i \in S} w_i \leq 20\%$

  The sector is derived from Sustainalytics Peer-Groups, based on the mapping described in Appendix 1.

- *Maximum weight per country*

  Maximal sector exposure is bounded at 20%: $\sum_{i \in C} w_i \leq 20\%$ for any country derived from the Benchmark Index.

- *Herfindahl constraint*

  The Herfindahl constraint, which manages the portfolio diversification, is set at 80: $\sum_{i=1}^{k} W_i^2 = \frac{1}{80}$

- *Total Carbon Emission reduction*

  The Carbon emissions the Portfolio are constrained to be lower than the Index Universe Carbon Emission by a specific percentage:

$$\sum_{i=1}^{k} \frac{w_i}{w_i^B} C_i \leq (1 - C_E) * \sum_{i=1}^{n} C_i$$

where:

w_i^B - the weight of stock i in the Index Universe

C_i - the last reported Carbon Emissions Scope 1 + 2 for stock i

k - the number of stocks in the Eligible Universe

n - the number of stocks in the Index Universe

C_E - defined as 40%

- *Total Carbon Intensity reduction*

    The Carbon Intensity of the Index is constrained to be lower by than the Index Universe Carbon Intensity by a specific percentage:

$$Intensity(Portfolio) \leq (1 - C_I) * Intensity(Index\ Universe)$$

Where:

C_I - defined as 40%

$Intensity(Portfolio)$ – represents the Carbon Intensity of the optimized portfolio and is determined as indicated below:

$$Intensity(Portfolio) = \frac{\sum_{i=1}^{k} \frac{w_i}{w_i^B} C_i}{\sum_{i=1}^{k} \frac{w_i}{w_i^B} REV_i}$$

$Intensity(Index\ Universe)$ - represents the Carbon Intensity of the Index Universe and is determined as indicated below:

$$Intensity(Index\ Universe) = \frac{\sum_{i=1}^{n} C_i}{\sum_{i=1}^{n} REV_i}$$

w_i^B - the weight of stock i in the Index Universe

REV_i - the last reported revenue (in millions of USD) for stock i

C_i - the last reported Carbon Emissions Scope 1 + 2 for stock i

w_i^B - the weight of stock i in the Index Universe

k - the number of stocks in the Eligible Universe

n - the number of stocks in the Index Universe

For the calculation of the Carbon Emission and the Carbon Intensity of the Index Universe, we need Carbon Emission and Revenue values for each security in the Index Benchmark. For stocks that do not have available data, the value will be estimated based on the process described in Appendix 2.

4. Relaxing the constraints

If the portfolios satisfying all the constraints is empty, the Total Carbon Emission Reduction and Total Carbon Intensity Reduction constraints can be relaxed. In this case, the parameters C_E and C_i will be gradually lowered to allow for non-empty optimization set.

5. Optimization numerical algorithm

The optimization problem is a quadratic constrained minimization problem. It is solved numerically, using the interior-point algorithm. This algorithm calculates an iterative sequence of approximate minimization problems, where inequality constraints are transformed into equality constraints using slack variables.

6. Removing stocks with small weights

As Input data to the optimization as well as intermediate calculations are not rounded, weights in the optimized portfolio above may be arbitrarily small. Components whose weights are negligible, specifically lower than 0.001, are rounded to 0 and effectively removed from the portfolio.

7. Second Optimization

A second optimization with the same exact function and constraints is then performed for the remaining stocks in, but the minimal weight constraint is replaced by: $w_i \geq 0.001$.

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 webpage under the section "Announcement", which is available at https://www.solactive.com/news/announcements/.

3.2. EXTRAORDINARY REBALANCE

The INDEX is not rebalanced extraordinarily.

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4. CALCULATION OF THE INDEX

4.1. INDEX FORMULA

The INDEX is calculated as a price return, net total return, 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 divisor 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 COMPONENT is quoted in a currency other than the INDEX CURRENCY.

Any dividends or other distributions are reinvested across the entire basket of INDEX COMPONENTS by means of a divisor at the 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.

4.2. ACCURACY

The level of the INDEX will be rounded to 4 decimal places. Divisors will be rounded to six 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 the 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 the following, but not conclusive, list of corporate actions as relevant for the 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", 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 every weekday which on which all of the following exchanges are open for trading: Hong Kong Stock Connect, Hong Kong Stock Exchange, Taiwan Stock Exchange, South Korea Stock Exchange, National Stock Exchange of India and Sao Paulo Stock Exchange.

"CALCULATION DAY" is every weekday from Monday to Friday.

"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 Sustainalytics. For more information, please visit: https://www.sustainalytics.com/

"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 SELECTION DAY.

"GUIDELINE" shall have the meaning as defined in Section "Introduction".

"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 the third Friday March and September. If that day is not a BUSINESS DAY the REBALANCE DAY will be the immediately following BUSINESS DAY.

"SELECTION DAY" is 4 BUSINESS DAYS before the scheduled REBALANCE DAY.

"SOLACTIVE" shall have the meaning as defined in Section "Introduction".

"START DATE" shall have the meaning as defined in Section 1.3.

"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.

APPENDINX 1: PEER GROUPS AND SECTOR AGGREGATION

Sector	Peer Group
Energy	Energy Services
	Oil & Gas Producers
	Refiners & Pipelines
Materials	Chemicals
	Construction Materials
	Containers & Packaging
	Diversified Metals
	Paper & Forestry
	Precious Metals
	Steel
Industrial	Aerospace & Defense
	Building Products
	Commercial Services
	Construction & Engineering
	Electrical Equipment
	Industrial Conglomerates
	Machinery
	Traders & Distributors
	Transportation
	Transportation Infrastructure

Cons. Discretionary	Auto Components
	Automobiles
	Consumer Durables
	Consumer Services
	Homebuilders
	Media
	Retailing
	Textiles & Apparel
Cons. Staples	Food Products
	Food Retailers
	Household Products
HealthCare	Healthcare
	Pharmaceuticals
Financials	Banks
	Diversified Financials
	Insurance
	Real Estate
IT	Semiconductors
	Software & Services
	Technology Hardware
Telecommunications	Telecommunication Services
Utilities	Utilities

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APPENDINX 2: CARBON AND REVENUE DATA CLEANING

To compute Carbon Emission and Carbon Intensity Constraints one needs carbon and revenue data for all the stocks in the Index Universe. For the stocks missing any of the two data points, we infer an estimated carbon data or revenue value as follows:

- Use old carbon (or revenue) data if there exist one otherwise:
- Define
    - Sector = all stocks in the Index Universe with carbon data and in the same Peer Group as the stock with missing carbon data.
    - Country = all stocks in the Index Universe with carbon data and in the same country as the stock with missing carbon data.
    - All = all stocks in the Index Universe with carbon data
    - Define the Proxy Set as the intersection of Sector and Country. If it is empty, use Sector. If it is also empty, use Country. If this is also empty, use All.
    - Compute the sum of carbon data for all stocks in the Proxy Set (*SumCD*)
    - Compute the total weight of stocks in the Proxy Set. (*SumWW*)
    - Compute the Relative Weight of the stock with missing carbon data:
    $$Rel\_w_i = \frac{w_i}{SumWW}$$
    - Assign to the stock with missing data the value $Rel_{w_i} * SumCD$

The same procedure applies for Revenue Data.

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