GUIDELINE

SOLACTIVE ATLANTIC SELECT INDEX

Version dated as of 22nd September 2022

CONTENTS

This document contains the underlying principles and regulations regarding the structure and the operating of the Solactive Atlantic Select Index. Solactive AG shall make every effort to implement regulations. Solactive AG does not offer any explicit or tacit guarantee or assurance, neither pertaining to the results from the use of the Index nor the Index value at any certain point in time nor in any other respect. The Index is merely calculated and published by Solactive AG and it strives to the best of its ability to ensure the correctness of the calculation. There is no obligation for Solactive AG – 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 AG is no recommendation for capital investment and does not contain any assurance or opinion of Solactive AG regarding a possible investment in a financial instrument based on this Index.

INTRODUCTION

This document is to be used as a guideline with regard to the composition, calculation and management of the Solactive Atlantic Select Index. Any changes made to the guideline are initiated by the Committee specified below. The Solactive Atlantic Select Index is the sole property of Solactive AG. The Europe US Selection Index is calculated and published by Solactive AG. The name "Solactive" is copyrighted.

1 INDEX SPECIFICATIONS

The Solactive Atlantic Select Index is a fixed-quantity price return index. The determination of the weights is based on two Reference Baskets ("Underlying Reference Baskets (EU/US)"). Detailed information regarding the Reference Baskets can be found below. The same disclaimers and legal information apply as for the Solactive Atlantic Select Index.

1.1 Short name and ISIN

The Solactive Atlantic Select Index is distributed under ISIN DE000SLA0W98; the WKN is SLA0W9. The Bloomberg Ticker is SOASE Index.

1.2 Initial value

The Solactive Atlantic Select Index is calculated every Calculation Date at 22:30 pm CET for the same Business day.

1.3 Distribution

The Solactive Atlantic Select Index is published via the price marketing services of Boerse Stuttgart AG and is distributed to all affiliated vendors.

1.4 Prices and calculation frequency

The index is calculated on any calendar day except on the 1st of January and 25th of December.

1.5 Weighting

The Solactive Atlantic Select Index is equally weighted across selected underlying components (as defined below).

The weighting methodology may be amended by the Committee if required due to legal framework.

1.6 Decision-making bodies

A Committee composed of Solactive AG employees is responsible for decisions regarding the composition of the Europe US Selection Index as well as any amendments to the rules (hereinafter referred to as the "Committee" or the "Underlying Strategy Basket Committee"). The Committee will also decide about the future composition of the Europe US Selection if any extraordinary event (see below) occurs and the implementation of any necessary adjustments. Any Member of the Committee can recommend at any time changes to the composition of the Underlying Strategy Basket or to the guideline and submit them to the Committee for approval.

1.7 Publication

All specifications and information relevant for calculating the Underlying Strategy Basket are made available on the http://www.solactive.com web pages and sub-pages.

1.8 Historical data

Historical backtested data are available starting January 2005. The index was first calculated on April 8th 2015.

1.9 Licensing

Licences to use the Underlying Strategy Basket as the underlying value for derivative instruments are issued to stock exchanges, banks, financial services providers and investment houses by Solactive AG.

2 COMPOSITION OF THE INDEX

2.1 Selection of the index components

The components of the Solactive Atlantic Index are reviewed every quarter. The selection of the underlying components and the calculation of the underlying reference baskets are defined below

2.2 Ordinary adjustment

The index is a fixed quantity index whose numbers of shares are rebalanced quarterly. The new quantities are calculated on the index review date, which is the last calculation day of each quarter. The quantities become effective COB on the index rebalancing day, which is the day falling five calculation days after the index review day.

2.3 Extraordinary adjustment

The index is not rebalanced extraordinarily.

3 CALCULATION OF THE INDEX

3.1 Index formula for the Solactive Atlantic Select Index

The Solactive Atlantic Select Index is a fixed-quantitiy Euro denominated index whose value reflects the value of the selected underlying components.

As a formula:

$$IL_t = \sum_i NOSH_{i,t^*} * Price_{i,t}/FX_{c(i),t}$$

Where

IL_t is the index level as of Calculation Date t

t^* is the index rebalancing date prior to t.

$NOSH_{i,t^*}$ is the number of shares of underlying component i as of Calculation Date t^*

$Price_{i,t}$ is the closing level of underlying component i at Calculation Date t.

i is the number of underlying components in the Long or Short unhedged Underlying Strategy Basket.

$c(i)$ is the currency in which underlying component i is denominated.

$FX_{c(i),t}$ is the exchange rate to convert one EUR into units of currency $c(i)$ at Calculation Date t.

The number of shares are calculated according to the following formula:

If t is a rebalancing date, then

$$NOSH_{i,t} = \frac{w_{i,t_{review}} * IL_{t_{review}}}{\left(Price_{i,t_{review}}/FX_{c(i),t_{review}}\right)}$$

If t is not a rebalancing date, then

$$NOSH_{i,t} = NOSH_{i,t-1}$$

Where

$w_{i,t_{review}}$ is the weight of underlying component i in the Solactive Atlantic Select Index on the review date immediately preceeding calculation date t. Please refer to section XY for the computation of the weigths.

3.1.1 Weight determination

3.1.1.1 Calculation of the reference weights

The weights for Solactive Atlantic Select Index are calculated on each basket review date (the last calculation day of each quarter). The vector of reference weights for the underlying components in the Universe as of basket review date t_{Rev}, $w_{t_{Rev}}^{Ref}$, is the solution to the following optimization problem:

$$\max_w \quad w' * Est\_Div_{t_{Rev}}$$

$$s.t. \quad \sum_i w_i = 1$$

$$w_i \in [0; 0.05]$$

$$\sqrt{w' * VC_{t_{Rev}} * w} \leq rvc * ReferenceVol_{t_{Rev}}$$

Where

$Est\_Div_{t_{Rev}}$ is the vector of estimated dividend yields of the underlying components in the Universe (each denominated in its original currency) as of basket review date t. Estimated dividend yields are computed from a dedicated data provider. It is in the sole discretion of the index owner to change the source for the calculation of the estimated dividend yield.

$VC_{t_{Rev}}$ is the variance-covariance matrix of the returns of the underlying components in the Universe (each denominated in its original currency) as of basket review date t_{Rev}. A generic element (i,j) of VC is calculated according to the following formula

$$VC_{t_{Rev}}(i,j) = \frac{1}{250} \sum_{k=0}^{249} \left(r_{i,t_{review}-k} - \overline{r_{i,t_{review}-k}} \right) \left(r_{j,t_{review}-k} - \overline{r_{j,t_{review}-k}} \right)$$

where

$$r_{i,t_{review}-k} = \ln\left(\frac{Price_{i,t_{review}-k}}{Price_{i,t_{review}-k-3}} \right) \sqrt{\frac{365}{Act(t(t-k-3), t(t-k))}}$$

$$\overline{r_{i,t-k}} = \frac{1}{250} \sum_{k=0}^{249} r_{i,t-k}$$

rvc is the relative volatility constraint which is set to 65 which is set to 65%. In case no solution does respect constraint of the optimization problem, then Relative Volatility Constraint shall be increased by 5%. This procedure is repeated until a solution to the optimization problem is found or if Relative Volatility Constraint is equal to 100%.

$ReferenceVol_{t_{Rev}}$ is the volatility of the European Reference Basket (as defined below) as of basket review date t_{Rev}. It is calculated according to the following formula:

$$ReferenceVol_{t_{Rev}} = \sqrt{\frac{1}{120} * \sum_{k=0}^{120} \left(\sqrt{\frac{365}{Act(t(t-k-3), t(t-k))}} * \ln\left(\frac{RB_{t_{Rev}-k}}{RB_{t_{Rev}-k-3}} \right) \right)^2 }$$

Where

$RB_{t_{Rev}-k}$ is the level of the EU Reference Basket as of Calculation Date $t_{Rev} - k$

$Price_{i,t_{review}-k}$ is the price of underlying component i as of Calculation Date $t_{review} - k$

$Act(t(t-k-3), t(t-k))$ is the number of calendar days between Calculation Date t-k-3 (included) and t-k (excluded)

3.1.1.2 Calculation of the weights for the Solactive Atlantic Select Index

The 25 highest non-null reference weighted underlying components (the selected underlying components) according to the reference weights as calculated above receive an equal weight of 4%, where non-null weight any weight higher than 0.01%. All other underlying components receive a weight of 0%.

In case non-null reference weighted underlying components number is strictly less than 25, then non-null reference weighted underlying components receive an equal weight of 100% divided by non-null reference weighted underlying components number. All other underlying components receive a weight of 0%.

3.1.4.3 Calculation of the weights for the Short unhedged Underlying Strategy Basket

The weights for the Short unhedged Underlying Strategy Basket are calculated the following way:

We define three sets:

1) Smallest weight subset: Those underlying components whose reference weights are below or equal 0.01%
2) The most capitalized subset: Those underlying components whose free-float market capitalization lies in the top 30% percentile.
3) The highest Beta subset: Those underlying components whose beta (as defined below) lies in the top 30% percentile.

We select those underlying components which lie in the intersection of the three sets as defined above. In case less than 19 underlying components are selected, we enlarge the percentiles of set 2) and set 3) by 1%. This procedure is repeated until at least 20 underlying components are selected.

One arrives at the weights for the Short unhedged Underlying Strategy Basket by equally weighting the selected underlying components.

The Beta is computed as of the Basket Review Date (t_{Rev}) using the last 250 3-day returns for each underlying Component in the Universe according to the following formula:

$$Beta(Component\ i, Reference\ Basket\ j, t_{Rev}) = \frac{\frac{1}{250}\sum_{k=0}^{249}\left(\left(r_{i,t_{review}-k} - \overline{r_{i,t_{review}-k}}\right)\right)\left(\left(r_{j,t_{review}-k} - \overline{r_{j,t_{review}-k}}\right)\right)}{\frac{1}{250}\sum_{k=0}^{249}\left(\left(r_{j,t_{review}-k} - \overline{r_{j,t_{review}-k}}\right)\right)^2}$$

Where,

$$r_{i,t_{review}-k} = \ln\left(\frac{Price_{i,t_{review}-k}}{Price_{i,t_{review}-k-3}}\right)\sqrt{\frac{365}{Act(t(t-k-3),t(t-k))}}$$

$$r_{j,t_{review}-k} = \ln\left(\frac{RB_{j,t_{review}-k}}{RB_{j,t_{review}-k-3}}\right)\sqrt{\frac{365}{Act(t(t-k-3),t(t-k))}},$$

where j is either EU or US

$Price_{i,t_{review}-k}$ is the price of underlying component i at calculation date $t_{review} - k$

Note that the Beta for an underlying component listed on an American Exchange is calculated using the US Reference Basket (as defined below), the Beta for an underlying component listed on an European Exchange is calculated using the EU Reference Basket (as defined below).

For the avoidance of doubt, the Beta for US stocks uses the prices of underlying components in USD. The Beta for European Stocks uses the price of the underlying components converted to EUR, except for underlying components denominated in GBP, in which case the underlying components are not converted to EUR.

3.1.2 Calculation of the Reference Baskets

There are two Reference Baskets underlying the Solactive Atlantic Select Index:

- the Europe Reference Basket
- the US Reference Basket

The Europe Reference Basket is comprised of the 200 biggest free-float capitalization shares (each of them an underlying component) in the European Universe (as defined below). It is a capitalization-weighted price return basket denominated in EUR which is rebalanced quarterly. On the basket review date (last calculation date of each quarter), new number of shares are calculated which become effective at the close of the basket rebalancing date (5 calculation days after the review date). As the basket is price return, the prices considered in the calculation are not adjusted for regular cash (but for irregular cash and rights issues).

The US Reference Basket is comprised of the 100 biggest free-float capitalization shares (each of them an underlying component) in the American Universe (as defined below). It is a capitalization-weighted price return basket denominated in USD which is rebalanced quarterly. On the basket review date (last calculation date of each quarter), new number of shares are calculated which become effective at the close of the basket rebalancing date (5 calculation days after the review date). As the basket is price return, the prices considered in the calculation are not adjusted for regular cash (but for irregular cash and rights issues).

"European Universe" means all securities that are part of the Solactive GBS Developed Markets Europe Investable Universe USD Index PR (ISIN: DE000SLA8DV6 on a Basket Review Date.

"American Universe" means all securities that are part of the Solactive GBS United States Investable Universe Index PR (ISIN: DE000SLA8D10 on a Basket Review Date.

The "Universe" consists of the union of the "European Universe" and the "American Universe".

For avoidance of doubt, the Universe is reviewed on a quarterly basis (the basket review date).

"Eligible Country" means the United States and any European country considered as developed by the Underlying Strategy Basket Calculation Agent. As of the Underlying Strategy Basket Launch Date, the list of Eligible Countries is the following: Austria, Belgium, Denmark, Finland, France, Germany, Greece, Ireland, Italy, Luxembourg, the Netherlands, Norway, Portugal, Spain, Sweden, Switzerland, the United Kingdom and the United States. Such list may be updated from time to time by the Underlying Strategy Basket Calculation Agent in order to insure that it remains consistent over time with the definition of developed countries as determined by the Underlying Strategy Basket Calculation Agent.

3.2 Accuracy

The EU US Selection Index is rounded to two decimal places.

3.3 Dividends and other distributions

As the index is price return, dividends are not reinvested in the index.

3.4 Corporate actions

Corporate actions are treated according to the standard treatment of corporate actions for price return indices according to the following document: https://www.solactive.com/documents/equity-index-methodology/.

3.5 Calculation of the Index in the event of a market disruption

Not Applicable.

4 DEFINITIONS

Calculation Date: All weekdays except 25th of December and 1st of January

Index Rebalancing Date: The last Calculation Day of each quarter

Index Review Date: The Calculation Date which falls five Calculation Dates before the Strategy Rebalancing Date.

Basket Rebalancing Date: The last Calculation Day of each quarter

Basket Review Date: The Calculation Date which falls five Calculation Dates before the Strategy Rebalancing Date

Underlying component: All shares belonging to the Universe as defined above

Selected Underlying components: All underlying components with the 20 highest reference weights

Reference weights: The solution to the optimization problem defined in Section 3.1.1.1

5 APPENDIX

5.1 Contact data

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5.2 Calculation of the Index – change in calculation method

The application by the Index Calculator of the method described in this document is final and binding. The Index Calculator 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, financial or tax reasons may require changes to be made to this method. The Index Calculator may also make changes to the terms and conditions of the Index and the method applied to calculate the Index, which he 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 Calculator is not obliged to provide information on any such modifications or changes. Despite the modifications and changes the Index Calculator will take the appropriate steps to ensure a calculation method is applied that is consistent with the method described above.