

## **GUIDELINE**

# **Solactive Europe Low Volatility Target Beta Index**

Version 1.0 dated August 2, 2016.



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This document contains the underlying principles and regulations regarding the structure and the operating of the Solactive Europe Low Volatility Target Beta Index (the “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 Index. Any changes made to the guideline are initiated by the Committee specified in section 1.6. The Index is calculated and published by Solactive AG. The name “Solactive” is copyrighted.

## 1 Index specifications

The Solactive Europe Low Volatility Target Beta Index (the “Index”) is an Index of Solactive AG and is calculated and distributed by Solactive AG. The beta is calculated over the last 120 Business Days against the Solactive Europe Total Market 675 Index (NTR).

The Index is intended to track the beta adjusted leveraged performance of the Solactive Low Volatility Europe Equal Weight 50 Index.

The Index is published in Euro [EUR].

### 1.1 Short name and ISIN

The Index is distributed under ISIN DE000SLA2LU4; the WKN is SLA2LU. The Index is published in Reuters under the code <.SOLELVTB > and in Bloomberg under the code SOLELVTB <Index>.

### 1.2 Initial value

The Index is based on 100 at the close of trading on the start date, August 3, 2001.

### 1.3 Distribution

The Index is published via the price marketing services of Boerse Stuttgart AG and is distributed to all affiliated vendors. Each vendor decides on an individual basis as to whether he will distribute/display the Index via his information systems.

### 1.4 Prices and calculation frequency

The price of the Index is calculated on each Business Day based on the prices on the respective Exchanges on which the Index Components are listed. The most recent prices of all Index Components are used. Prices of Index Components not listed in the Index Currency are translated using spot foreign exchange rates quoted by Reuters. Should there be no current price available on Reuters, the most recent price or the Trading Price on Reuters for the preceding Trading Day is used in the calculation.

The Index is calculated every Business Day from 9:00am to 10:35pm, CET. In the event that data cannot be provided to Reuters or to the pricing services of Boerse Stuttgart AG the Index cannot be distributed.

Any incorrect calculation is adjusted on a retrospective basis.

## **1.5 Weighting**

On each Adjustment Day the beta adjusted leverage of the underlying index is adjusted according to section 3.1.

## **1.6 Decision-making bodies**

A Committee composed of staff from Solactive AG is responsible for decisions regarding the composition of the index as well as any amendments to the rules (in this document referred to as the "Committee" or the "Index Committee"). The future composition of the Index is determined by the Committee on the Selection Days according to the procedure outlined in 2.1 of this document. The Committee shall also decide about the future composition of the Index, if any Extraordinary Events should occur and the implementation of any necessary adjustments.

Members of the Committee can recommend changes to the guideline and submit them to the Committee for approval.

## **1.7 Publication**

All specifications and information relevant for calculating the Index are made available on the <http://www.solactive.de> web page and sub-pages.

## **1.8 Historical data**

Historical data will be maintained from the launch of the Index on August 2, 2016.

Backtested performance data is available prior to the launch date until August 3, 2001.

## **1.9 Licensing**

Licences to use the Index 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 Index tracks the beta adjusted leveraged performance of the underlying index and subtracts interest based on that leverage. The beta is calculated over the last 120 Business Days against the Benchmark Index.

### **2.2 Ordinary adjustment**

The leverage is reviewed monthly on the selection date and becomes effective at the close of the Adjustment Day.

The first adjustment will be made in August 2016 based on the Trading Prices of the Index Components on the Adjustment Day.

### **2.3 Extraordinary adjustment**

The Committee may, but is under no obligation to, substitute the Underlying Index or the Benchmark Index with a Successor upon the occurrence of a Market Disruption Event as determined by Solactive AG, if the Market Disruption Event is happening for at least ten consecutive Business Days. Any such Successor shall be included in the Index after the close of business on a day determined by Solactive AG.

## 3 Calculation of the Index

### 3.1 Index formula

The Index is calculated according to the following formula:

$$I_t = I_{t-1} \cdot \left( 1 + L_A \cdot \left( \frac{UI_t}{UI_{t-1}} - 1 \right) + (1 - L_A) \cdot r_{t-1} \cdot \frac{DCF}{365} \right)$$

with:

$I_t$  = Index value on Business Day t

$I_{t-1}$  = Index value on the Business Day immediately preceding Business Day t

$UI_t$  = Underlying Index value on Business Day t

$UI_{t-1}$  = Underlying Index value on the Business Day immediately preceding Business Day t

$r_{t-1}$  = The last available one-month EURIBOR rate before Business Day t, as displayed under the Reuters-RIC EURIBOR1M=

$DCF$  = number of calendar days between Business Day t and the Business Day immediately preceding Business Day t

$L_A$  = Leverage determined on the Selection Day immediately preceding the Adjustment Day immediately preceding Business Day t, calculated as

$$(i) \quad L_A = TL_S, \quad \text{if } -0.2 \leq \frac{TL_S}{TL_{S-1}} - 1 \leq 0.2$$

$$(ii) \quad L_A = 0.8 \cdot TL_{S-1}, \quad \text{if } \frac{TL_S}{TL_{S-1}} - 1 < -0.2$$

$$(iii) \quad L_A = 1.2 \cdot TL_{S-1}, \quad \text{if } \frac{TL_S}{TL_{S-1}} - 1 > 0.2$$

with:

$TL_S$  = Target Leverage determined on the Selection Day immediately preceding Business Day t, calculated as

$$TL_S = \min \left[ 2; \max \left[ 1; \frac{1}{beta_S} \right] \right]$$

with:

$$beta_S = \frac{\sum_{i=0}^{119} \ln \left( \frac{UI_{S-i}}{UI_{S-i-1}} \right) \cdot \ln \left( \frac{BI_{S-i}}{BI_{S-i-1}} \right)}{\sum_{i=0}^{119} \ln \left( \frac{BI_{S-i}}{BI_{S-i-1}} \right)^2}$$

with:

$BI_S$  = Benchmark Index value on the Selection Day immediately preceding Business Day t

$TL_{S-1}$  = Target Leverage determined on the Selection Day immediately preceding Selection Day S

### 3.2 Accuracy

The value of the Index will be rounded to two decimal places.

The value of the Benchmark Index will be rounded to two decimal places.

### 3.3 Calculation of the Index in the event of a Market Disruption Event

An Index is not calculated in the event of a Market Disruption Event. If the Market Disruption Event continues over a period of eight Trading Days, the Index Calculator calculates the Index value, taking into account the market conditions prevailing at this point in time, the last quoted Trading Price for each of the Index Components as well as any other conditions that it deems relevant for calculating the Index value.

## 4. Definitions

The “**Underlying Index**” is the Solactive Low Volatility Europe Equal Weight 50 Index (ISIN DE000SLA2EU9).

The “**Benchmark Index**” is the Solactive Europe Total Market 675 Index (NTR) (ISIN DE000SLA15U0).

A “**Business Day**” is every weekday other than a Saturday or Sunday.

The “**Index Calculator**” is Solactive AG or any other appropriately appointed successor in this function.

The “**Index Currency**” is Euro [EUR].

“**Adjustment Day**” is the 3rd Business Day following the Selection Day.

“**Selection Day**” is the last Business Day of each month.

A “**Market Disruption Event**” occurs if the Underlying Index is not published at a scheduled Business Day.

# 5 Appendix

## 5.1 Contact data

### Information regarding the Index concept

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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.