

# GUIDELINE Solactive ERSTE Multi Asset Index 35 VC

Version 1.0 dated February 19<sup>th</sup>, 2018



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This document contains the underlying principles and regulations regarding the structure and the operating of the Solactive ERSTE Multi Asset Index 35 VC ("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 Indices nor the Index values at any certain point in time nor in any other respect. The Indices are 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 these Indices.

## Introduction

This document is to be used as a guideline with regard to the composition, calculation and management of the Solactive ERSTE Multi Asset Index 35 VC. Any changes made to the guideline are initiated by the Committee specified in section 1.6 of this document. The Index is calculated and published by Solactive AG. The name "Solactive" is copyrighted.

## **1** Index specifications

The Solactive ERSTE Multi Asset Index 35 VC is calculated and distributed by Solactive AG.

The Index takes a variable exposure to the Solactive ERSTE Multi Asset Index 35 (ISIN: DE000SLA5DZ3, Bloomberg SEMA35 Index) with the aim to achieve an annualized volatility of less than or equal to 7%. The Index therefore notionally invests in Solactive ERSTE Multi Asset Index 35 and a hypothetical money market position at the 3-month Euribor rate (as published on Reuters under the RIC EURIBOR3M=, Bloomberg EUR003M Index). The index does not allow leverage and considers an adjustment factor of 1.65% per annum (which is deducted on a daily basis).

The Index is calculated and published in EUR.

#### 1.1 Short name and ISIN

The Indices are distributed under the following identifiers:

Name	ISIN	WKN	Characteristic	Bloomberg
Solactive ERSTE Multi Asset Index 35 VC	DE000SLA5QD2	SLA5QD	Volatility Target	SEMA35VC Index

#### 1.2 Initial value

The Indices are launched with a level of 100.00 at the close on the start date, August 28<sup>th</sup> 2014. Data before that date is backtested.

## 1.3 Distribution

The Indices are published via the price marketing services of Boerse Stuttgart AG and are distributed to all affiliated vendors. Each vendor decides on an individual basis as to whether he will distribute/display the Solactive ERSTE Multi Asset Index 35 VC via his information systems.

#### 1.4 Prices and calculation frequency

The level of the Index is calculated for each Calculation Day on which the Solactive ERSTE Multi Asset Index 35 is published (such a day being a Publication Day).

The Solactive ERSTE Multi Asset Index 35 VC is calculated every Business Day 23:00 pm 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.

#### 1.5 Weighting

The weights of the index components can change on a daily basis. The determination of the weights is described in detail in Section 3.

#### **1.6 Decision-making bodies**

A Committee composed of staff from Solactive is responsible any amendments to the rules (in this document referred to as the "Index Committee").

#### 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 February 15<sup>th</sup> 2018.

#### 1.9 Licensing

Licences to use the Index as the underlying for investment products issued by stock exchanges, banks, financial services providers and investment houses or for benchmark usage are granted by Solactive AG.

# 2 Composition of the Index

## 2.1 Selection of the Index Components

The Index is composed of the following two underlyings (each of them an Underlying Component, together the Underlying Components):

- 1) Solactive ERSTE Multi Asset Index 35 (Underlying Component 1).
- 2) 3-month Euribor (Underlying Component 2).

## 2.2 Ordinary adjustment

Not applicable

## 2.3 Extraordinary adjustment

Not applicable.

# **3** Calculation of the Index

#### 3.1 Index formula

The Index Level for any Calculation Day t, denoted  $Index_t$ , is determined in accordance with the following formula, where  $Index_0 = 100$ :

$$Index_{t} = Index_{t-1} * \frac{VT_{t}}{VT_{t-1}} * \left(1 - AF * \frac{DC_{t,t-1}}{360}\right)$$

With:

AF = 1.65%

 $DC_{t,t-1}$  = Number of Calendar Days from (and excluding) Calculation Day t-1 to (and including) Calculation Day t

 $VT_t$  is the volatility-controlled basket on Calculation Day t, which is calculated according to the following formula, where  $VT_0 = 100$ :

$$VT_t = VT_{t-1} * \left( 1 + W_{t-1} * \left( \frac{UC1_t}{UC1_{t-1}} - 1 \right) + (1 - W_{t-1}) * \left( \frac{M_t}{M_{t-1}} - 1 \right) - BEF_t \right)$$

with:

 $VT_t$  = Index Level as of Calculation Day t

 $W_{t-1}$  = Exposure as of Calculation Day t-1

 $UC1_t$  = The closing level of Underlying Component 1 for Calculation Day t

 $M_t$  = Level of the Capitalised Money Market instrument for Calculation Day t

 $BEF_t$  = Basket Execution Fee on Calculation Day t

The level of the Capitalised Money Market instrument for Calculation Day t is calculated according to the following formula:

$$M_t = M_{t-1} * \left( 1 + r_{t-3}^{EUR} * \frac{DC_{t,t-1}}{360} \right)$$

With:

 $r_{t-3}^{EUR}$  = the level of the 3-month Euribor as of Calculation Day t-3

The level of the Exposure as of Calculation Day t is calculated according to the following set of formulas, where

 $W_0 = W_1 = 1$ :

$$W_{t} = \begin{cases} \min(1, W_{t-2}^{Target}) \text{ if } W_{t-1} > (1 + tolerance) * W_{t-2}^{Target} \\ \min(1, W_{t-2}^{Target}) \text{ if } W_{t-1} < (1 - tolerance) * W_{t-2}^{Target} \\ W_{t-1} \text{ otherwise} \end{cases}$$

With:

tolerance = 0.05

 $W_t^{Target}$  is calculated according to the following formula:

 $W_t^{Target} = \frac{TargetVol}{max(Vol20_t, Vol60_t)}$ 

With:

TargetVol = 0.07

The 20-day and 60-day volatility (denoted by  $Vol20_t$  and  $Vol60_t$  respectively) are calculated according to the following formulae:

$$\begin{aligned} Vol60_t &= \sqrt{252} * \sqrt{\frac{60}{59} * \left(\frac{1}{60} * \sum_{j=1}^{60} \left(ln \left(\frac{UC1_{t-60+j}}{UC1_{t-60+j-1}}\right)^2\right) - \left(\frac{1}{60} \sum_{j=1}^{60} ln \left(\frac{UC1_{t-60+j}}{UC1_{t-60+j-1}}\right)\right)^2\right)} \\ Vol20_t &= \sqrt{252} * \sqrt{\frac{20}{19} * \left(\frac{1}{20} * \sum_{j=1}^{20} \left(ln \left(\frac{UC1_{t-20+j}}{UC1_{t-20+j-1}}\right)^2\right) - \left(\frac{1}{20} \sum_{j=1}^{20} ln \left(\frac{UC1_{t-20+j}}{UC1_{t-20+j-1}}\right)\right)^2\right)} \end{aligned}$$

 $BEF_t$  is the basket execution fee on Calculation Day t, which is calculated according to the following formula:

$$BEF_{t} = EF * \left| W_{t-1} - W_{t-2} * \frac{VT_{t-2}}{VT_{t-1}} * \frac{UC1_{t-1}}{UC1_{t-2}} \right|$$

With:

|x| = absolute Value of x

*EF* = Basket execution fee of 0.04%

#### **3.2 Precision**

The Index Level will be published with rounding to [2] decimal places.

#### 3.3 Adjustments

Not applicable.

3.4 Dividends and other distributions

Not applicable.

#### 3.5 Corporate actions

Not applicable.

#### **3.6 Recalculation**

Solactive AG makes the greatest possible efforts to accurately calculate and maintain its indices. However, the occurrence of errors in the index determination process cannot be ruled out. In such cases Solactive AG strictly adheres to its publicly available <u>Correction Policy</u>.

## 3.7 Market Disruption

In periods of market stress Solactive AG calculates its indices following predefined and exhaustive arrangements set out in its publicly available <u>Disruption Policy</u>.

## 4. Definitions

**"Underlying Components"** are the Solactive Diversified Developed Economy Healthcare PR Index and the 3-month USD Libor rate (as published on Reuters under the RIC: USD3MFSR=)

A "Calculation Day" is any weekday for which the Underlying Component 1 is scheduled to have a Closing Price published.

The **"Target Volatility"** is 7%.

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

The "Index Currency" is EUR.

# **5** Appendix

5.1 Contact data Solactive AG Guiollettstr. 54 60325 Frankfurt am Main Phone: +49 (0) 69 719 160 22 FAX: +49 (0) 69 719 160 25 E-Mail: complex@solactive.com

## 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 Series. 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 Indices and the method applied to calculate the Indices, 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.