INDEX GUIDELINE

SOLACTIVE K US LOW VOLATILITY AR INDEX NTR

Version 1.0

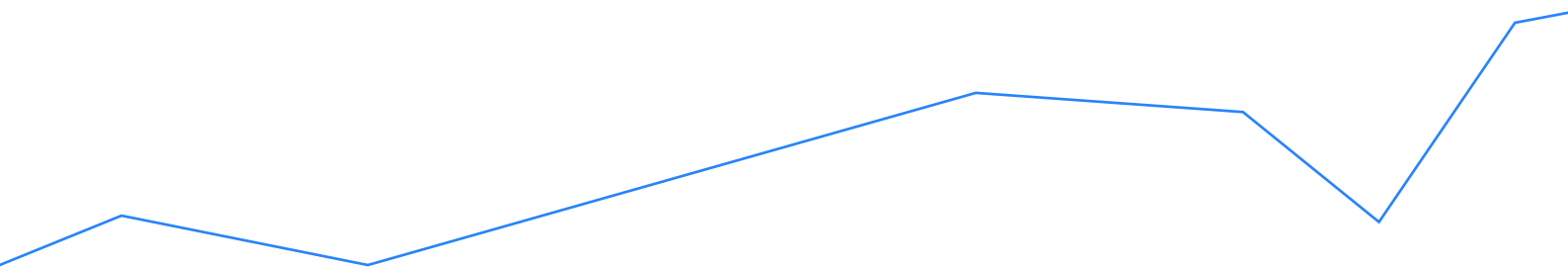07 March 2019

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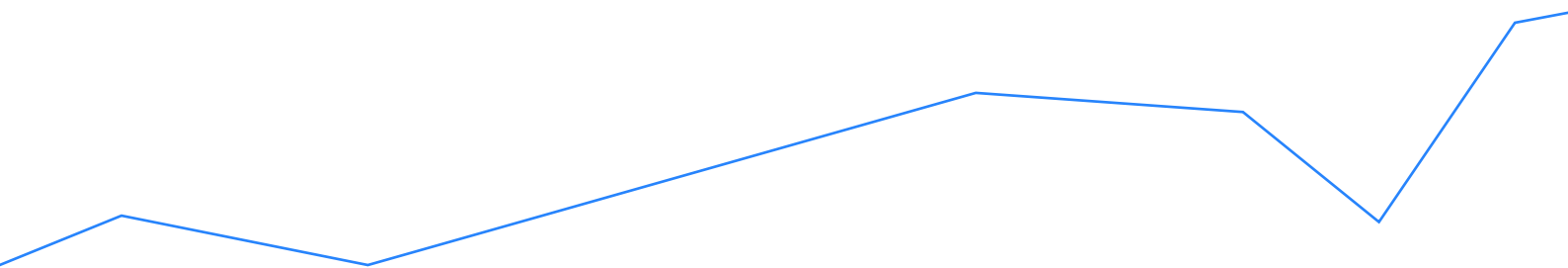Version 1.0 – 07 March 2019

INTRODUCTION

This document (the "Guideline") is to be used as a guideline with regard to the composition, calculation and maintenance 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 trademarked.

It contains the underlying principles and rules regarding the structure and operation of the Solactive K US Low Volatility AR Index NTR ("The Index"). Solactive AG shall make every effort to implement the applicable 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 does not constitute a 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.

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Index Specifications

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1 INDEX SPECIFICATIONS

> The Solactive K US Low Volatility AR Index NTR (the "Index") is calculated and distributed by Solactive AG.

> The Index is published in USD.

1.1 SHORT NAME AND ISIN

The Index is distributed under ISIN DE000SLA7PL3, the WKN is SLA7PL.

1.2 INITIAL VALUE

The Index is based on 1000 at the close of trading on the start date, 22 March 2007.

1.3 DISTRIBUTION

The Index is published via the price marketing services of Boerse Stuttgart GmbH and is distributed to all affiliated vendors, including Bloomberg. Each vendor decides on an individual basis as to whether it will distribute/display the Index via its information systems.

1.4 PRICES AND CALCUATION 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 daily index closing value is calculated using Reuters/WMCO closing spot rates as at 4pm London time.

The Index is calculated every Business Day from 9:00 a.m. to 10:52 p.m., CET. In the event that data cannot be provided to Thomson Reuters or to the pricing services of Boerse Stuttgart GmbH, the Index cannot be distributed.

1.5 WEIGHTING

N / A.

1.6 OVERSIGHT

A Committee composed of staff from Solactive (the "Committee" or the "Index Committee") is responsible for decisions regarding any amendments to the rules of the index.

Changes to the Guideline are submit 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.com web page and sub-pages.

1.8 HISTORICAL DATA

Historical data will be maintained from the launch of the Index on 08 March 2019.
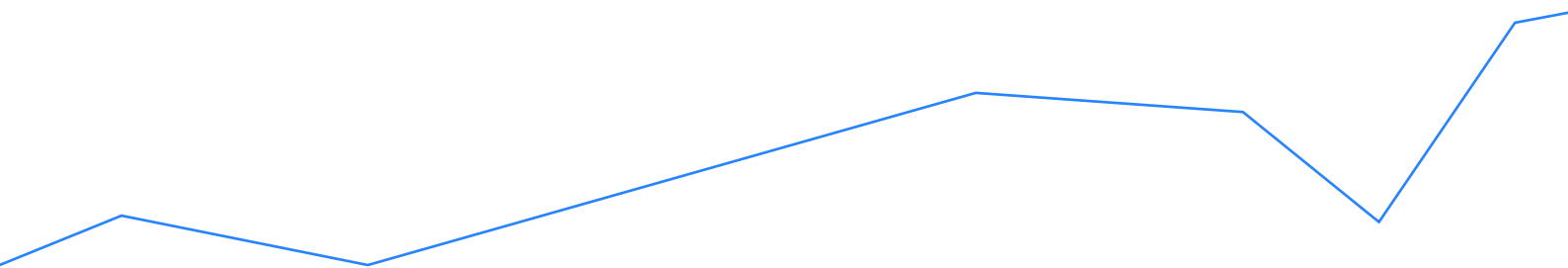
1.9 LICENSING

Licenses 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.

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Composition of the Index

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2 COMPOSITION OF THE INDEX

2.1 SELECTION OF THE INDEX COMPONENTS

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

1) Solactive K US Low Volatility NTR Index

2) Solactive GBS United States Large & Mid Cap Index NTR

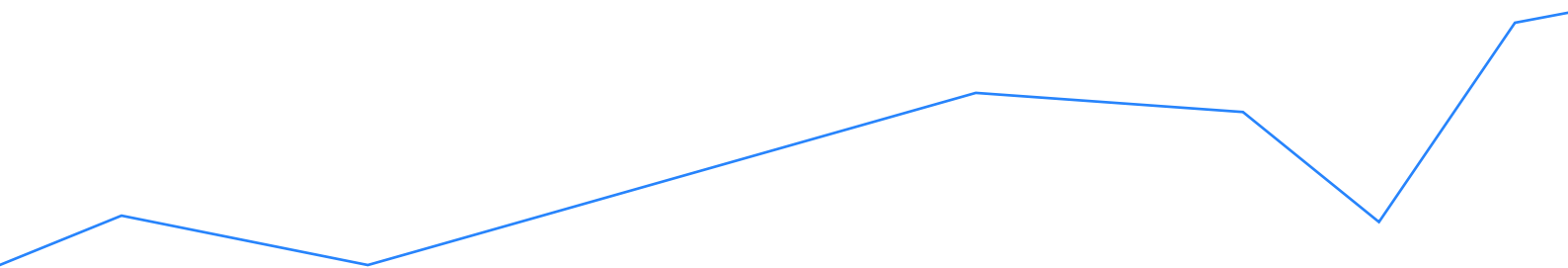3) 3-month USD Libor rate

2.2 ORDINARY ADJUSTMENT

Not applicable

2.3 EXTRAORDINARY ADJUSTMENT

Not applicable

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Calculation of the Index

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3 CALCULATION OF THE INDEX

3.1 MODEL

The Index Level for any Calculation Day is determined in accordance with the following formula:

$$I_t = I_{t-1} * \left(1 + DLF_{t-2}\left(\frac{Ul_t}{Ul_{t-1}} - 1\right) + (1 - DLF_{t-2}) * r_{t-1} * \frac{DD_{t-1}}{360}\right) * \left(1 - MF * \frac{DD_{t-1}}{360}\right)$$

with:

- I_t : Index Level as of Calculation Day t

- UI_t : level of Solactive K US Low Volatility TR Index on Calculation date

- r_{t-1} : Level of the interest rate (US3MLIBOR), expressed as a percentage, for Calculation Day t-1 as published on Thomson Reuters (divided by 100)

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

- DLF_{t-1} : Daily leverage factor on calculation day t

- MF : Management Fee of 0.5%

The formula for DLF_t is given below:

$$DLF_t = \begin{cases} \min\left(max\left(\frac{1}{\beta_t}, 1\right), 1.5\right) & if\ MA_{50}(t) > MA_{200}(t) \\ 1 & else \end{cases}$$

Where β is the beta of Long Basket stocks, which may also be interpreted as proxy for the volatility behavior, and MA_n is a simple moving average rolling on n periods:

$$MA_n(t) = \frac{1}{n}\sum_{i=t-n+1}^{t} Price_{Bm}(i)$$

The Beta is calculated as the following:

$$\beta_t = \beta(t) = \frac{\sum_{i=t-124}^{t} \delta_{\text{UI}}(i) * \delta_{\text{Bm}}(i)}{\sum_{i=t-124}^{t} \delta_{\text{Bm}}^2(i)}$$

Where:

$$\delta_{\text{k}}(t) = \ln\left(\frac{Price_k(t)}{Price_k(t-1)}\right) - \frac{\sum_{i=t-124}^{t} \ln\left(\frac{CP(k,i)}{CP(k,i-1)}\right)}{124}$$

with k in $\{UI$ (" Underlying Index"), Bm (" Benchmark")$\}$

3.2 ACCURACY

> The value of the Index will be rounded to 2 decimal places.

3.3 ADJUSTMENTS

Not applicable

3.4 DIVIDENDS AND OTHER DISTRIBUTIONS

Cash dividend and special dividend payments are not applicable in the Index.

3.5 CORPORATE ACTIONS

Not applicable

3.6 MISCELLANEOUS

3.6.1 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 adheres to its publicly available Correction Policy.
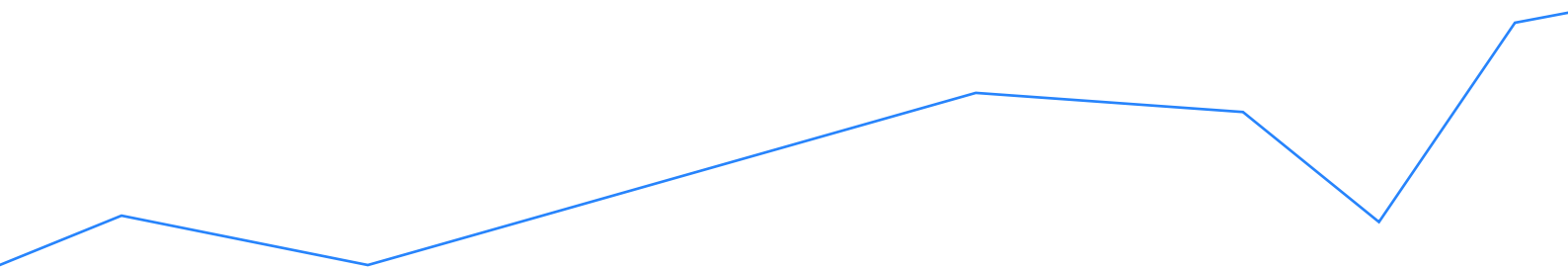
3.6.2 Market Disruption

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

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Definitions

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4 DEFINITIONS

The "Underlying Components" are the components listed in Section 2.1.

A "Calculation Day" is any weekday that New York Stock Exchange is open for trading.

A "Publication Day" is each Calculation Day.

The "Number of **Shares**" are in respect of an Index Component and any given Business Day the number or fraction of shares included in the Index. It is calculated for any Index Component as the ratio of (A) the Percentage Weight of an Index Component multiplied by the Index value and (B) its Trading Price (converted into the Index Currency according to the principles laid out in Section 1.4 of this document).

The "**Percentage Weight**" of an Index Component is the ratio of its Trading Price multiplied by its Number of Shares divided by the Index value.

The "**Exchange**" is, in respect of the Index and every Index Component, the respective primary exchange where the Index Component has its primary listing. The Committee may decide to declare a different stock exchange the "Exchange" for trading reasons, even if the company is only listed there via a Stock Substitute.

With regard to an Index Component (subject to the provisions given above under "Extraordinary Events") the "**Trading Price**" in respect of a Trading Day is the closing price on this Trading Day determined in accordance with the Exchange regulations. If the Exchange has no closing price for an Index Component, the Index Calculator shall determine the Trading Price and the time of the quote for the share in question in a manner that appears reasonable to it.

A "**Trading Day**" is in relation to the Index or an Index Component a Trading Day on the Exchange (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 normal Exchange closing time. The Index Calculator is ultimately responsible as to whether a certain day is a Trading Day with regard to the Index or an Index Component or in any other connection relating to this document.

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

The "**Index Currency**" is USD.

The "**Market Capitalisation**" is with regard to each of the securities in the Index on a Selection Day the share class-specific Market Capitalisation for any security in the Index Universe. It is calculated as the multiplication of the shares outstanding (as sourced from data vendors) with the Trading Price of the share class as of the respective Selection Day.

A "**Business Day**" is any day on which the New York Stock Exchange is open for trading.

A "**Market Disruption Event**" occurs if

1. one of the following events occurs or exists on a Trading Day prior to the opening quotation time for an Index Component:

A) trading is suspended or restricted (due to price movements that exceed the limits allowed by the Exchange or an Affiliated Exchange, or for other reasons):

1.1. across the whole Exchange; or

1.2. in options or futures contracts on or with regard to an Index Component or an Index Component that is quoted on an Affiliated Exchange; or

1.3. on an Exchange or in a trading or quotation system (as determined by the Index Calculator) in which an Index Component is listed or quoted; or

B) an event that (in the assessment of the Index Calculator) generally disrupts and affects the opportunities of market participants to execute on the Exchange transactions in respect of a share included in the Index or to determine market values for a share included in the Index or to execute on an Affiliated Exchange transaction with regard to options and futures contracts on these shares or to determine market values for such options or futures contracts.

2. trading on the Exchange or an Affiliated Exchange is ceased prior to the "**Normal Exchange Closing Time**", which is the time at which the Exchange or an Affiliated Exchange is normally closed on working days without taking into account after-hours trading or other trading activities carried out outside the normal trading hours. An exception to this classification as a Market Disruption Event is where the early cessation of trading is announced by the Exchange or Affiliated Exchange on this Trading Day at least one hour before

2.1. the actual closing time for normal trading on the Exchange or Affiliated Exchange on the Trading Day in question or, if earlier.

2.2. the closing time (if given) of the Exchange or Affiliated Exchange for the execution of orders at the time the quote is given.

3. a general moratorium is imposed on banking transactions in the country in which the Exchange is resident if the above-mentioned events are material in the assessment of the Index Calculator, whereby the Index Calculator makes its decision based on those circumstances that it considers reasonable and appropriate.

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Appendix

5 APPENDICES

5.1 CONTACT DATA

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5.2 CHANGES 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 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 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.