

INDEX GUIDELINE

Solactive Top 10 US Technology VT Index

VERSION 1.01

09 AUGUST 2019



TABLE OF CONTENTS

Introduction	3
1. Index Specifications	4
1.1. Scope of the Index	4
1.2. Identifiers and Publication	4
1.3. Initial Level of the Index	4
2. Index Selection	5
2.1. Index CONSTITUENTS.....	5
3. Calculation of the Index	5
3.1. Index formula	5
3.2. Accuracy	6
3.3. Recalculation.....	6
3.4. Market Disruption.....	7
4. Miscellaneous.....	7
4.1. Discretion	7
4.2. Methodology Review.....	7
4.3. Changes in calculation method.....	7
4.4. Termination	8
4.5. Oversight	8
5. Definitions.....	8
Contact.....	9



INTRODUCTION

This document (the "Guideline") is to be used as a guideline with regard to the composition, calculation and maintenance of the Solactive Top 10 US Technology VT Index (the "Index"). Any amendments to the rules made to the Guideline are approved by the Index Committee specified in Section 5.5. The Index is calculated, administered and published by Solactive AG ("Solactive") assuming the role as index administrator (the "Index Administrator") under the Regulation (EU) 2016/1011 (the "Benchmark Regulation" or "BMR"). The name "Solactive" is trademarked.

The Guideline and the policies and guidelines 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

The Solactive Top 10 US Technology VT Index ("Index") is a USD (the "Index Currency") denominated index.

The Index takes a variable exposure to the Underlying Index with the aim to achieve an annualized volatility of less than or equal to 14%. The Index therefore notionally invests in the Underlying Index in excess of a hypothetical money market position at the 3-month USD Libor rate (as published on Thomson Reuters under the RIC USD3MFSR=, Bloomberg US0003M Index). The index allows a maximal leverage of 150%.

1.2. IDENTIFIERS AND PUBLICATION

The Index is published under the following identifiers:

Name	ISIN	Currency	Type	RIC	BBG ticker
Solactive Top 10 US Technology VT Index	DE000SLA8W17	USD	ER	.SOTEC10V	SOTEC10V Index

The Index is published 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. In the event that data cannot be provided to the price marketing services of Boerse Stuttgart GmbH, the Index cannot be published.

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 31 December 2012 (the "Start Date") is 1000. Levels of the Index published for a period prior to the 08 August 2019 ("Launch Date") have been back-tested.



2. INDEX SELECTION

2.1. INDEX CONSTITUENTS

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

Component	Name	Currency	RIC	BBG Ticker
1	Solactive Top 10 US Technology Index	USD	.SOTEC10N	SOTEC10N index
2	3-month USD Libor rate	USD	USD3MFSR=	US0003M Index

3. CALCULATION OF THE INDEX

3.1. INDEX FORMULA

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

$$V_t = V_{t-1} \times \left[1 + w_{t-1}^V \times \left(\frac{A_t}{A_{t-1}} - 1 - R_{t-1} * \frac{DC(t-1, t)}{360} \right) - SD * \frac{DC(t-1, t)}{360} \right]$$

$$w_t^V = \min \left(MaxWeight, \frac{Volatility Target}{RefVol_{t-1}} \right)$$

Where:

Subscript (t) refers to the given Index Business Day

Subscript $(t-1)$ refers to the Index Rebalancing Day immediately preceding (but not including) Index Business Day (t)

V_{date} is the Strategy Value on calendar date $(date)$

$DC(t-1, t)$ is the number of Calendar Days from (and excluding) Calculation Day $t-1$ to (and including) Calculation Day t

A_{date} is the Asset Value on calendar date $(date)$



w_{date}^V is the Asset Weight on calendar date_(date)

R_t means US Dollar 3 Month ICE Libor Interest Rate ["USD3MFSR=", Bloomberg US0003M Index"] Business Day immediately preceding the Index Business Day_(t)

MM_{date} is the Money Market Value on calendar date_(date)

Specific parameters:

Asset = Underlying Equity Index (Component 1) (rebalanced basket defined above – separate rules)

SD = 3.75%

Where SD is the per annum synthetic dividend distributed and subtracted daily from the index level

MaxWeight = 150%

Volatility Target = 14%

RefVol_t = *Vol30d_(t)*

$$Vol30d_{(t)} = \sqrt{\frac{252}{30} \times \sum_{i=1}^{30} \left(\ln \left(\frac{A_{t-30+i}}{A_{t-30+i-1}} \right) \right)^2}$$

3.2. ACCURACY

The Index Level will be rounded to 2 decimal places.

3.3. RECALCULATION

Solactive makes the greatest possible efforts to accurately calculate and maintain its indices. However, errors in the index 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: www.solactive.com.



3.4. 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: www.solactive.com. 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.

4. MISCELLANEOUS

4.1. 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 in accordance with the Solactive's Discretion Policy, which is available at Solactive's website: www.solactive.com.

4.2. METHODOLOGY REVIEW

The methodology of the Index is subject to regular review. 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 [Methodology Policy](#), which is incorporated by reference and available on the Solactive website: www.solactive.com.

Such change in the Methodology will be announced on the Solactive webpage 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.

4.3. 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.

4.4. 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 an 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 Termination Policy, which is incorporated by reference and available on the Solactive website: www.solactive.com.

4.5. OVERSIGHT

An index committee composed of staff from Solactive and its subsidiaries (the "Index 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 Index Committee for prior approval and will be made in compliance with the "Solactive Methodology Policy", which is available at [insert address: www.solactive.com].

5. DEFINITIONS

This section contains defined terms used throughout this Guideline document.

The "Underlying Components" are the components listed in Section 2.1, together known as the "Index Components."



A "Index Business Day" is any weekday on which the underlying SOTEC10N Index is scheduled to be published.

The Rebalancing Day is each index business day, where the index rebalances the asset weight based on the reference volatility.

A "Publication Day" is each Index Business Day.

The "Target Volatility" is 14%

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.

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.

CONTACT

Solactive AG
German Index Engineering

Guiollettstr. 54
60325 Frankfurt am Main
Germany

Tel.: +49 (0) 69 719 160 00

Fax: +49 (0) 69 719 160 25

Email: info@solactive.com

Website: www.solactive.com

© Solactive AG