

# GUIDELINE

## German Market Low Volatility Index

Version 1.0 dated 14<sup>th</sup> of November 2016



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## DISCLAIMER

This document contains the underlying principles and regulations regarding the structure and the operating of the German Market Low Volatility 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 German Market Low Volatility Index. Any changes made to the guideline are initiated by the Committee specified in section 1.4. The German Market Low Volatility Index is calculated and published by Solactive AG. The name “Solactive” is copyrighted.

## 1. INDEX SPECIFICATIONS

### 1.1 INDEX SUMMARY

The German Market Low Volatility Index (“German Market Low Volatility Index”, the “Index”) is an Index of Leonteq Securities AG and is calculated and distributed by Solactive AG.

The German Market Low Volatility Index intends to track German companies that are characterized with low price volatility.

<b>Index Name</b>	German Market Low Volatility Index
<b>Index Type</b>	Net Total Return (NTR)
<b>Index Currency</b>	EUR
<b>Index Start Date</b>	02.11.2016
<b>Index Initial Value</b> <i>(Index<sub>Index Start Date</sub>)</i>	196.54
<b>ISIN</b>	DE000SLA2RB1
<b>WKN</b>	SLA2RB
<b>Reuters Code</b>	.GELOWVOL
<b>Bloomberg Ticker</b>	GELOWVOL Index

### 1.2 DISTRIBUTION

The German Market Low Volatility 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 German Market Low Volatility Index via his information systems.

### 1.3 PRICES AND CALCULATION FREQUENCY

The price of the German Market Low Volatility Index is calculated on each Business Day, from 9:00am to 10:30pm CET, 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, if applicable. Should there be no current price available on Reuters, the most recent price or the Trading Price on Reuters for the preceding Business Day is used in the calculation.

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.

### 1.4 DECISION-MAKING BODIES

A Committee composed of staff from Solactive AG is responsible for decisions regarding the composition of German Market Low Volatility 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 German Market Low Volatility 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 German Market Low Volatility 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.

## **1.5 PUBLICATION**

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

## **1.6 HISTORICAL DATA**

Historical data of the Index will be maintained from the Index Start Date.

## **1.7 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 Leonteq Securities AG.

## 2. COMPOSITION OF THE INDEX

### 2.1 SELECTION OF THE INDEX MEMBERS

The composition of the German Market Low Volatility Index is reviewed four times per year, on the Selection Days. Index Members are selected from the Eligible Universe as described below.

**Selection Days:** 1<sup>st</sup> Business Day of January, April, July and October.

**Eligible Universe:** stocks (common stock or preferred stock) that fulfill the following criteria:

- (a) Listing on Xetra Stock Exchange with headquarters in Germany
- (b) The stock must be among the top 110 from (a) according to Free Float Market Capitalization
- (c) Average daily value traded on the primary stock exchange in the last month of at least 2.5 million EUR
- (d) First trade date should be at least the 180 business day prior to the Selection Day.
- (e) If more than one share line of any entity meets criteria (a) - (c), only the most liquid share line is eligible for selection

**Index Members:** the 30 stocks from the Eligible Universe with the lowest (180 business days) realized volatility. If there are less than 30 stocks in the Eligible Universe, all stocks in the Eligible Universe are selected as Index Members.

### 2.2 ORDINARY ADJUSTMENT

After the selection of the Index Members, Weights are defined during the 10 Rebalancing Days as described below.

**Rebalancing Days:** from the 4<sup>th</sup> Business Day to the 13<sup>th</sup> Business Day of January, April, July and October.

The 10 Rebalancing Days period is used for the rebalancing to avoid any liquidity issue using the below mechanism.

During the Rebalancing Days, stocks from the Eligible Universe are given new Weights which converge to the Target Weights defined below.

**Target Weight:**

On each Selection Day  $t$ , the Target Weight  $w_{i,t}^*$  for each stock  $i$  from the Eligible Universe is defined as below:

$w_{i,t}^* = 1/30$  , if the stock  $i$  is an Index Member

$w_{i,t}^* = 0$  , if the stock  $i$  is not an Index Member

On each Business Day  $t$  which is not a Selection Day, the Target Weight  $w_{i,t}^*$  of each stock  $i$  from the Eligible Universe is equal to  $w_{i,t-1}^*$ .

**Weight:**

On each  $n^{\text{th}}$  Rebalancing Day  $t$ , the Weight  $w_{i,t}$  of each stock  $i$  from the Eligible Universe is set as follows:

$$w_{i,t_0+n-1} = w_{i,t_0-1} + \frac{n \times (w_{i,t_0+n-1}^* - w_{i,t_0-1})}{10}, 0 < n \leq 10$$

Where:

$t_0$  = first Rebalancing Day

$w_{i,t_0-1}$  = Weight of the Index Component  $i$  at the close immediately prior to the first Rebalancing Day

On each Business Day  $t$  which is not a Rebalancing Day, the Weight  $w_{i,t}$  of each stock  $i$  from the Eligible Universe is set as follows:

$$w_{i,t} = \frac{x_{i,t} \times p_{i,t}}{Index_t}$$

Where:

$x_{i,t}$  = Number of Shares of the Index Component  $i$  on Business Day  $t$

$p_{i,t}$  = Trading Price of Index Component  $i$  on Business Day  $t$  in the Index Currency

Solactive AG shall publish any changes made to the Index composition on the Selection Day and consequently with sufficient notice before the Rebalancing Day.

### 2.3 EXTRAORDINARY ADJUSTMENT

If an Index Component included in German Market Low Volatility Index is removed from the Index between Rebalancing Days due to an Extraordinary Event, if necessary, the Committee shall designate a successor. This is announced by Solactive AG after the close of business on the day on which the new composition of the Index was determined by the Committee.

If all information is readily available to Solactive AG, Solactive AG tries to provide two Index Calculation Dates prior notice before the day on which the new Index composition will become effective.

### 2.4 INITIAL COMPOSITION OF THE INDEX

As of the Index Start Date, the composition of the Index is set as per below:

Initial Index Members $i$	ISIN $i$	Initial Number of Shares ( $x_{i,Index\ Start\ Date}$ )
ALSTRIA OFFICE REIT-AG	DE000A0LD2U1	0.558741
TAG IMMOBILIEN AG	DE0008303504	0.551633
DEUTSCHE TELEKOM	DE0005557508	0.464042
FREENET	DE000A0Z2ZZ5	0.261951
TALANX AG	DE000TLX1005	0.240274
DEUTSCHE POST	DE0005552004	0.240059
DEUTSCHE WOHNEN	DE000A0HN5C6	0.220671
CTS EVENTIM AG & CO KGAA	DE0005470306	0.206566
VONOVIA SE	DE000A1ML7J1	0.206249
SOFTWARE AG	DE0003304002	0.200796
PRO 7 SAT 1 MEDIA SE	DE000PSM7770	0.176236
DEUTSCHE EUROSHOP	DE0007480204	0.168801
FUCHS PETROLUB SE	DE0005790430	0.164645
AXEL SPRINGER SE	DE0005501357	0.152194
ALSTRIA OFFICE REIT-AG	DE000A0LD2U1	0.558741
FRAPORT	DE0005773303	0.12791
SYMRISE	DE000SYM9999	0.106355
FRESENIUS SE	DE0005785604	0.095073
FIELMANN	DE0005772206	0.090236
FRESENIUS MED. CARE ST	DE0005785802	0.087408
SAP SE	DE0007164600	0.084752
BASF	DE000BASF111	0.0844
LEG IMMOBILIEN AG	DE000LEG1110	0.08421
BEIERSDORF	DE0005200000	0.083189
MAN ST	DE0005937007	0.07233
MTU	DE000A0D9PT0	0.070003
HANNOVER RÜCK	DE0008402215	0.067848
MERCK KGAA	DE0006599905	0.067724
HENKEL KGAA VZ	DE0006048432	0.056248
ADIDAS	DE000A1EWWW0	0.042142



### 3. CALCULATION OF THE INDEX

#### 3.1 INDEX FORMULA

The German Market Low Volatility Index is an index whose value on a Business Day  $t$  is equal to the sum overall Index Components of the products of (a) the Number of Shares of the Index Component and (b) the Trading Price of the Index Component at the respective Exchange.

##### Index Value:

On each Business Day  $t$ ,  $Index_t = \sum_{i=1}^{N^*} x_{i,t} \times p_{i,t}$

Where:

$x_{i,t}$  = Number of Shares of the Index Component  $i$  on Business Day  $t$

$p_{i,t}$  = Trading Price of Index Component  $i$  on Business Day  $t$  in the Index Currency

$N^*$  = Number of Index Components

##### Number of Shares:

The Number of Shares is in respect of a stock and any given Business Day the number or fraction of shares included in the Index and is computed according to the below formula.

On each Rebalancing Day  $t$ ,  $x_{i,t} = w_{i,t} \times \frac{Index_{t-1}}{p_{i,t-1}}$

On each Business Day  $t$  which is not a Rebalancing Day and in the absence of any corporate actions that cause an adjustment in the Number of Shares for any Index Component, the Number of Shares  $x_{i,t}$  of each stock  $i$  from the Eligible Universe is equal to  $x_{i,t-1}$ . Changes in the Number of Shares as a result of corporate actions are described in Section 3.4.

#### 3.2 ACCURACY

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

The Number of Shares  $x_{i,t}$  of each Index Component will be rounded to six decimal places.

The Trading Price of each Index Component will be rounded to six decimal places.

#### 3.3 ADJUSTMENTS

Indices need to be adjusted for systematic changes in prices once these become effective. This requires the new Number of Shares of the affected Index Component to be calculated on an ex-ante basis.

The German Market Low Volatility Index is adjusted for distributions, capital increases, rights issues, splits, par value conversions and capital reductions.

This procedure ensures that the first ex quote can be properly reflected in the calculation of the Index. This ex-ante procedure assumes the general acceptance of the Index calculation formula as well as open access to the parameter values used. The calculation parameters are provided by Solactive AG.

Any delay in calculating the new Number of Shares of an Index Component would create problems. Therefore the procedure described above is the most appropriate.

#### 3.4 CORPORATE ACTIONS

### 3.4.1 Principles

Following the announcement by an Index Component included in the Index of the terms and conditions of a corporate action the Index Calculator determines whether such corporate action has a dilution, concentration or other effect on the price of the Index Component.

If this should be the case the Index Calculator shall make the necessary adjustments to the affected Index Component and/or the formula for calculating the Index and/or to other terms and conditions of this document that he deems appropriate in order to take into account the dilution, concentration or other effect and shall determine the date on which this adjustment shall come into effect.

Amongst other things the Index Calculator can take into account the adjustment made by an Affiliated Exchange as a result of the corporate action with regard to option and futures contracts on the respective share traded on this Affiliated Exchange.

### 3.4.2 Dividends and other distributions

Dividend payments and other distributions are included in the Index. They cause an adjustment of the Number of Shares of the corresponding Index Component  $i$  on Business Day  $t$ . The new Numbers of Shares is calculated as follows:

$$x_{i,t} = x_{i,t-1} \times \frac{p_{i,t-1}}{p_{i,t-1} - D_{i,t}}$$

Where:

$D_{i,t}$  = Payment of Index Component  $i$  on Business Day  $t$  multiplied by the Dividend Correction Factor of the respective country

### 3.4.3 Capital increases

In the case of capital increases (from the Index Component's own resources or through cash contributions) the new Numbers of Shares of the corresponding Index Component  $i$  on Business Day  $t$  is calculated as follows:

$$x_{i,t} = x_{i,t-1} \times \frac{p_{i,t-1}}{p_{i,t-1} - rB_{i,t-1}}$$

Where:

$$rB_{i,t-1} = \frac{p_{i,t-1} - B - N}{BV + 1}$$

$rB_{i,t-1}$  = Calculated value of rights issue of Index Component  $i$  on Business Day  $t - 1$

$B$  = Price of rights issue

$N$  = Dividend disadvantage

$BV$  = Subscription ratio

$B = 0$  if capital is increased from the Index Component's own resources.

The last dividend paid or the announced dividend proposal is applied as the dividend disadvantage.

### 3.4.4 Capital reductions

In the case of capital reductions the new Numbers of Shares of the corresponding Index Component  $i$  on Business Day  $t$  is calculated as follows:

$$x_{i,t} = x_{i,t-1} \times \frac{1}{H_{i,t}}$$

Where:

$H_{i,t}$  = Reduction ratio of the Index Component  $i$  on Business Day  $t$

### 3.4.5 Share splits and par value conversions

In the case of share splits and par value conversions it is assumed that the prices change in ratio to the number of shares or to the par values. The new Numbers of Shares of the corresponding Index Component  $i$  on Business Day  $t$  is calculated as follows:

$$x_{i,t} = x_{i,t-1} \times \frac{N_{i,t-1}}{N_{i,t}}$$

Where:

$N_{i,t-1}$  = Former par value of security class  $i$  (or new number of shares)

$N_{i,t}$  = New par value of security class  $i$  (or former number of shares)

## 3.5 CALCULATION OF THE INDEX IN THE EVENT OF A MARKET DISRUPTION EVENT

In the event of a Market Disruption Event, Solactive AG 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

“**NTR**” means Net Total Return, meaning that dividends are re-invested adjusted for the applicable withholding tax rate and/or other applicable tax rate currently prevalent in the respective country (as specified in section 3.4).

A “**Business Day**” is a day on which Xetra Stock Exchange is open for trading.

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

The “**Index Currency**” is EUR.

“**Rebalancing Day**” is the 4<sup>th</sup> through 13<sup>th</sup> Business Day in January, April, July and October (the index is rebalanced over a ten-day period).

“**Selection Day**” is the 1<sup>st</sup> Business Day in January, April, July and October.

“**Dividend Correction Factor**” is calculated as 1 minus the applicable withholding tax rate and/or other applicable tax rate currently prevalent in the respective country.

An “**Extraordinary Event**” is

- a Merger
- a Takeover bid
- a delisting
- the Nationalisation of a company
- Insolvency.

The Trading Price for this Index Component on the day the event came into effect is the last available market price for this Index Component quoted on the Exchange on the day the event came into effect (or, if a market price is not available for the day the event came into effect, the last available market price quoted on the Exchange on a day specified as appropriate by the Index Calculator), as determined by the Index Calculator, and this price is used as the Trading Price of the particular Index Component until the end of the day on which the composition of the Index is next set.

In the event of the Insolvency of an issuer of an Index Component the Index Component shall remain in the Index until the next Rebalancing Day. As long as a market price for the affected Index Component is available on a Business Day, this shall be applied as the Trading Price for this Index Component on the relevant Business Day, as determined in each case by the Index Calculator. If a market price is not available on a Business Day the Trading Price for this Index Component is set to zero. The Committee may also decide to eliminate the respective Index Component at an earlier point in time prior to the next Rebalancing Day. The procedure in this case is identical to an elimination due to and Extraordinary Event.

An Index Component is “**delisted**” if the Exchange announces pursuant to the Exchange regulations that the listing of, the trading in or the issuing of public quotes on the Index Component at the Exchange has ceased immediately or will cease at

a later date, for whatever reason (provided delisting is not because of a Merger or a Takeover bid), and the Index Component is not immediately listed, traded or quoted again on an exchange, trading or listing system, acceptable to the Index Calculator.

**“Insolvency”** occurs with regard to an Index Component if (A) all shares of the respective issuer must be transferred to a trustee, liquidator, insolvency administrator or a similar public officer as result of a voluntary or compulsory liquidation, insolvency or winding-up proceedings or comparable proceedings affecting the issuer of the Index Components or (B) the holders of the shares of this issuer are legally enjoined from transferring the shares.

A **“Takeover bid”** is a bid to acquire, an exchange offer or any other offer or act of a legal person that results in the related legal person acquiring as part of an exchange or otherwise more than 10% and less than 100% of the voting shares in circulation from the issuer of the Index Component or the right to acquire these shares, as determined by the Index Calculator based on notices submitted to public or self-regulatory authorities or other information considered by the Index Calculator to be relevant.

With regard to an Index Component a **“Merger”** is

- (i) a change in the security class or a conversion of this share class that results in a transfer or an ultimate definite obligation to transfer all the shares in circulation to another legal person,
- (ii) a merger (either by acquisition or through forming a new structure) or a binding obligation on the part of the issuer to exchange shares with another legal person (except in a merger or share exchange under which the issuer of this Index Component is the acquiring or remaining company and which does not involve a change in security class or a conversion of all the shares in circulation),
- (iii) a takeover offer, exchange offer, other offer or another act of a legal person for the purposes of acquiring or otherwise obtaining from the issuer 100% of the shares issued that entails a transfer or the irrevocable obligation to transfer all shares (with the exception of shares which are held and controlled by the legal person), or
- (iv) a merger (either by acquisition or through forming a new structure) or a binding obligation on the part of the issuer of the share or its subsidiaries to exchange shares with another legal person, whereby the issuer of the share is the acquiring or remaining company and it does not involve a change in the class or a conversion of the all shares issued, but the shares in circulation directly prior to such an event (except for shares held and controlled by the legal person) represent in total less than 50% of the shares in circulation directly subsequent to such an event.

The **“Merger Date”** is the date on which a Merger is concluded or the date specified by the Index Calculator if such a date cannot be determined under the law applicable to the Merger.

**“Nationalisation”** is a process whereby all shares or the majority of the assets of the issuer of the shares are nationalised or are expropriated or otherwise must be transferred to public bodies, authorities or institutions.

**“Exchange”** is, in respect of German Market Low Volatility 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.

**“Stock Substitute”** includes in particular American Depository Receipts (ADR) and Global Depository Receipts (GDR).

With regard to an Index component (subject to the provisions given above under “Extraordinary Events”) the **“Trading Price”** in respect of a Business Day is the closing price on this Business 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 him.

**“Free Float Market Capitalization”** is with regard to each of the shares in the Eligible Universe on a Selection Day or Rebalancing Day the value published as the Free Float Market Capitalization for this day.

As at the date of this document Free Float Market Capitalization is defined as the value of a security that is available to the public calculated by multiplying the number of shares in circulation of the security by its share price.

An **“Affiliated Exchange”** is with regard to an Index Component an exchange, a trading or quotation system on which options and futures contracts on the Index Component in question are traded, as specified by the Index Calculator.

A **“Market Disruption Event”** occurs if

1. one of the following events occurs or exists on a Business 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; or

2. trading on the Exchange or an Affiliated Exchange is ceased prior to the usual closing time (as defined below), unless the early cessation of trading is announced by the Exchange or Affiliated Exchange on this Business Day at least one hour before

(aa) the actual closing time for normal trading on the Exchange or Affiliated Exchange on the Business Day in question or, if earlier.

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

**“Normal exchange closing time”** 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; or

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 his decision based on those circumstances that he considers reasonable and appropriate.

## **5. APPENDIX**

### **5.1 CONTACT DATA**

#### **Information regarding the German Market Low Volatility Index concept**

Leonteq Securities AG  
Brandschenkestraße 90  
CH-8027 Zurich

#### **Index Calculator**

Solactive AG  
Guiollettstr. 54  
60325 Frankfurt am Main  
Germany

### **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.