

GUIDELINE

Solactive Euro Premia Index

Version 1.0 dated August 31st, 2017



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This document contains the underlying principles and regulations regarding the structure and the operating of the Solactive Euro Premia 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 trademarked.

1 Index specifications

The Solactive Euro Premia Index (the “Index”) is an Index of Solactive AG and is calculated and distributed by Solactive AG.

The Index is designed to provide long exposure to a basket of European stocks selected based on several value and quality criteria (the “Long Basket”), while taking short positions in a basket of the 50 largest EUR-denominated stocks in terms of Free-Float Market Capitalization from the Solactive Europe Total Market 675 Index (ISIN: DE000SLA2AR3) (the “Short Basket”)

The Long Basket is calculated as a Net Total Return index, the Short Basket is calculated as a Gross Total Return index,

The Index is published in EUR.

1.1 Short name and ISIN

The Index is distributed under ISIN DE000SLA38Z1; the WKN is SLA38Z. The Index is published on Reuters under the code <.SOLEURP> and on Bloomberg under the code <SOLEURP Index>.

The Long Basket is distributed with the name “Euro RP Long Underlying Basket Strategy” under ISIN DE000SLA3256, the WKN is SLA325. The Index is published on Reuters under the code <.SLERPL> and on Bloomberg under the code <SLERPL Index>.

The Short Basket is distributed with the name “Euro RP Short Underlying Basket Strategy” under ISIN DE000SLA3264, the WKN is SLA326.

1.2 Initial value

The Index is based on 100 at the close of trading on the start date, 19th July 2002.

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 10:30pm, 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

1.5.1 Weighting of Solactive Euro Premia Index

The weight of the Long Basket and Short Basket is reset monthly on the Rebalancing Date to 100% and -50% respectively, see Section 3.1 for more details.

1.5.2 Weighting of Long Basket

All members of the Long Basket are assigned an equal Target Weight of 1/30 on each Long Basket Selection Day. The Target Weight is implemented over a 3-day period as described in section 2.2.2 of this document,

1.5.3 Weighting of Short Basket

On each Short Basket Selection Day, the new Short Basket Components are weighted according to Free-Float Market Capitalization. The relevant Float Shares outstanding as of the Selection Day are used and are implemented as of close on the Short Basket Adjustment Day. The Shares are adjusted for corporate actions between Short Basket Selection Day and Short Basket Adjustment Day. This only relates to corporate actions that have a direct impact on the price and shares (i.e. stock splits, stock dividends, rights issues). The number of Float Shares is sourced from a data provider that is chosen by the Index Calculator and might change over time.

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 in the event that 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 September 5th, 2017.

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

2.1.1 Selection of the Long Basket Components

On the Long Basket Selection Day, the selection of the Long Basket members proceeds in the exact order of the steps outlined below:

1. Long Basket Universe:

- 1.1. Select all stocks from the Solactive Europe Total Market 675 Index, which are denominated in EUR
- 1.2. Retain only stocks with an Average Daily Value (ADV) Traded over the previous 60 days up to and including the Long Basket Selection day exceeding EUR 3 million.

2. Eligible Basket

- 2.1. For each stock in the Long Basket Universe, calculate the average volatility for the last 20 and last 60 days according to the following formulas:

$$\sigma_{20\text{days}}(t) = \sqrt{\frac{252}{20} \times \sum_{k=0}^{19} \left(r_i(\text{RD} - k) - \frac{1}{20} \sum_{s=0}^{19} r_i(\text{RD} - s) \right)^2}$$
$$\sigma_{60\text{days}}(t) = \sqrt{\frac{252}{60} \times \sum_{k=0}^{59} \left(r_i(\text{RD} - k) - \frac{1}{60} \sum_{s=0}^{59} r_i(\text{RD} - s) \right)^2}$$

With, in respect of each stock (i) and Business Day (t):

$$r_i(t) = \ln \left(\frac{p_{i,t}}{p_{i,t-1}} \right)$$

where:

$p_{i,t}$ = Price of Index Component i on Trading Day t

- 2.2. Assign a rank ("Volatility Ranking") to each stock according to both volatilities, where for each volatility, the stock with the lowest volatility is assigned the first rank
- 2.3. For both of the above rankings, compute the volatility decile for each stock according to the following formula:

$$\text{volatility decile} = 10 - \text{floor} \left(10 \times \frac{\text{Volatility Ranking}}{\text{number of stocks in Universe A at this Review Date}} \right)$$

- 2.4. The Eligible Basket is composed of all stocks from the Long Basket Universe for which both volatility deciles are not lower than 5.

3. Value Score

- 3.1. For each stock in the Long Basket Universe, calculate the following scores:

- 3.1.1. The Book to Price Score is calculated as the difference between (i) the Company Book to Price Ratio for the relevant stock and (ii) the median Company Book to Price Ratio of all companies which have the same Sector as the relevant Company.
- 3.1.2. The Earnings to Price Score is calculated as the difference between (i) the Company Earnings to Price Ratio for the relevant stock and (ii) the median Company Earnings to Price Ratio of all companies which have the same Sector as the relevant Company.
- 3.1.3. The One Year Forward Earnings to Price Score is calculated as the difference between (i) the Company One Year Forward Earnings to Price Ratio for the relevant stock and (ii) the median Company One Year Forward Earnings to Price Ratio of all companies which have the same Sector as the relevant Company.
- 3.1.4. The EBITDA to Enterprise Value Score is calculated as the difference between (i) the Company EBITDA to Enterprise Value Ratio for the relevant stock and (ii) the median Company EBITDA to Enterprise Value Ratio of all companies which have the same Sector as the relevant Company.
- 3.1.5. The Free Cash Flow to Price Score is calculated as the difference between (i) the Company Free Cash Flow to Price Ratio for the relevant stock and (ii) the median Company Free Cash Flow to Price Ratio of all companies which have the same Sector as the relevant Company.
- 3.2. Assign 5 separate ranks to each stock based on the 5 scores under 3.1, where the highest rank is assigned to the stock with the highest respective score.
- 3.3. Calculate the Total Value Score for each stock in the Long Basket Universe as the arithmetic average over the 5 ranks specified in 3.2. For each stock, a Total Value Score is calculated only if sufficient data is available for at least two of the ranks specified in 3.2.
- 3.4. The Value Rank for each stock i in the Eligible Basket is determined by the following formula:

$$Value Rank_i = 1 - \frac{Rank(Total Value Score_i)}{\sum_i Exists[Rank(Total Value Score_i)]}$$

where:

$Total Value Score_i$ = The Total Value Score calculated in 3.3.

$Exists[X]$ = 1 if Data [X] is available, = 0 otherwise

$Rank[X]$ = The rank of Data[X] across the Eligible Basket. The highest value of Data[X] is assigned rank 1. In the case of a tie between two or more stocks, the stock with the highest ADV over the previous 60 days up to and including the Long Basket Selection Day, is assigned the lowest rank.

4. Quality Score

4.1. Piotroski Score

For all stocks in the Eligible Basket, the Piotroski Score is calculated according to the following formula:

$$Piotroski Score = \sum_{i=1}^9 Ind(Criterion_i)$$

Where $Ind[X] = 1$ if X is true and $Ind[X] = 0$ otherwise;

And the set of criteria is defined as per the table below:

i	$Criterion_i$
1	$T12M(Return\ on\ Assets, t_{LB\ Sel}) \geq 0$
2	$T12M(Cash\ Flow\ from\ Operations, t_{LB\ Sel}) \geq 0$
3	$T12M(Return\ on\ Assets, t_{LB\ Sel}) \leq T12M(Cash\ Flow\ from\ Pperations, t_{LB\ Sel})$

4	$\Delta(\text{Return on Assets}, t_{LB\ Sel}) \geq 0$
5	$\Delta(\text{Leverage}, t_{LB\ Sel}) \leq 0$
6	$\Delta(\text{Current Ratio}, t_{LB\ Sel}) \geq 0$
7	$\Delta(\text{Number of Shares}, t_{LB\ Sel}) \leq 5\%$
8	$\Delta(\text{Gross Operating Margin}, t_{LB\ Sel}) \geq 0$
9	$\Delta(\text{Asset Turnover}, t_{LB\ Sel}) \geq 0$

$\Delta(X, t_{LB\ Sel})$ is calculated in respect of Data [X] and the Long Basket Selection Day ($t_{LB\ Sel}$) according to the following formula:

$$\Delta(X, t_{LB\ Sel}) = T12M(X, t_{LB\ Sel}) - T12M(X, t_{LB\ Sel-12})$$

Where $t_{LB\ Sel-12}$ is the fiscal year preceding the current fiscal year in which the Long Basket Selection Day $t_{LB\ Sel}$ (excluded) falls (i.e., the four (4) fiscal quarters preceding the most recent four (4) fiscal quarters for Companies reporting quarterly, the two (2) semi-annual fiscal periods preceding the most recent two (2) semi-annual fiscal periods for Companies reporting semi-annually or the fiscal year preceding the current fiscal year for Companies reporting annually).

“Asset Turnover” is trailing 12 months (T12M) sales divided by the T12M assets at $t_{LB\ Sel-12}$

“Cash Flow From Operations” is the 12M cash flow from operations divided by the T12M total assets. at $t_{LB\ Sel-12}$

“Current Ratio” is the T12M current assets divided by the T12M current liabilities.

“Gross Operating Margin” is the T12M gross income divided by the T12M sales.

“Leverage” is the T12M long-term debt divided by the average of the T12M total assets and T12M Total Assets at $t_{LB\ Sel-12}$.

“Number of Shares” is the T12M common shares outstanding.

“Return on Assets” is the T12M net income before extraordinary items divided by the T12M total assets at $t_{LB\ Sel-12}$.

4.2. Merton Score

Factually, all stocks in the Eligible Basket for which data is available are ranked according to their Distance to Default, the farthest one from default being assigned the rank 1. If data is not available, the stock is not ranked. Based on this ranking, the Merton Score is computed with the following formula:

$$\text{Merton Score} = 10 - \text{floor} \left(10 \times \frac{\text{Ranking of Distance to Default}}{\text{worst ranking in Eligible Basket}} \right)$$

“Distance to Default” is the probability for the asset value of a Company to fall below a certain default point calculated according to the following formula:

$$Distance\ to\ Default = \frac{\ln\left(\frac{Assets}{T12M(Default\ Point,\ t_{LB\ Sel})}\right) + \left(Rate - \frac{\sigma_A^2}{2}\right)}{\sigma_A}$$

“Default Point” is the sum of the last reported current liabilities and half of the last reported long-term liabilities.

“Rate” is, with respect to each Long Basket Selection Day $t_{LB\ Sel}$, the 6-month Euribor rate as published on FactSet under the FactSet-Symbol “EURIBOR6M-FDS.

The Eligible Basket Component’s asset value (“Assets”) and volatility (“ σ_A ”) are determined by jointly solving the following equations:

$$Total\ Equity = Assets \times N(d) - e^{-Rate} \times Default\ Point \times N(d - \sigma_A)$$

$$\sigma_E = \frac{Assets}{Total\ Equity} \times N(d) \times \sigma_A$$

$$d = \frac{1}{\sigma_A} \times \left(\ln\left(\frac{Assets}{Default\ Point}\right) + Rate + \frac{\sigma_A^2}{2} \right)$$

And:

“Total Equity” is the last published full equity market capitalization.

“ σ_E ” is the 6-month historical price volatility calculated as the standard deviation of daily price changes over the past 130 weekdays prior to $t_{LB\ Sel-12}$ (included).

- 4.3. The Total Quality Score for each stock equals the sum of its’ Merton and Piotroski Score
- 4.4. The Quality rank for each stock i in the Eligible Basket is determined by the following formula:

$$Quality\ Rank_i = 1 - \frac{Rank(Total\ Quality\ Score_i)}{\sum_i\ Exists[Rank(Total\ Quality\ Score_i)]}$$

where:

Total Quality Score_i = The Total Quality Score calculated in 4.3.

Exists[X] = 1 if Data [X] is available, = 0 otherwise

Rank[X] = The rank of Data[X] across the Eligible Basket. The highest value of Data[X] is assigned rank 1. In the case of a tie between two or more stocks, the stock with the highest ADV over the previous 60 days up to and including the Long Basket Selection Day, is assigned the lowest rank.

5. Final Composition

On each Long Basket Selection Day, two side baskets shall be created: a Quality basket, with the 30 best performers in the Quality Rank, and a Value basket, with the 30 best performers in the Value Rank. The performance of these baskets will affect the composition of the Long Basket on the following Long Basket Selection Day.

Considering that these two baskets were created on the previous Long Basket Selection Day, their performances from the last Long Basket Selection Day to Long Basket Selection Day shall be recorded. Based on their performances, a Global Rank shall be computed for each stock in the Eligible basket at Review Date, with the following rules:

- If the performance of the preceding Quality basket is more than 2.5% above the performance of the Value basket, the Global Rank for each stock is equal to 0.8 times its Quality Rank (as calculated in 4.4, page 9) plus 0.2 times its Value Rank (3.4, page 7)

- If the performance of the preceding Value basket is more than 2.5% above the performance of the Quality basket, the Global Rank for each stock is equal to 0.8 times its Value Rank plus 0.2 times its Quality Rank
- Else, the Global Rank for each stock is equal to 0.5 times its Value Rank plus 0.5 times its Quality Rank.

The Long Basket shall be composed of the 30 best performers of this Global Rank, where the stock with the highest Global Rank is assigned rank 1.

2.1.2 Selection of the Short Basket Components

On the Short Basket Selection Day, the 50 EUR-denominated stocks with the highest Free-Float Market Capitalization from the Solactive Europe Total Market 675 Index (ISIN: DE000SLA2AR3) are selected.

2.2 Ordinary adjustment

2.2.1 Ordinary adjustment of the Solactive Euro Premia Index

The Index is adjusted monthly on the Rebalancing Date; see Section 3.1 for more details.

The first adjustment will be made in September 2017 based on the Trading Prices of the Index Components on the Adjustment Day.

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

2.2.2 Ordinary adjustment of the Long Basket

The composition of the Long Basket is ordinarily reviewed every month of each year on the Long Basket Selection Day by Solactive AG. The composition of the Long Basket is adjusted during the Long Basket Rebalancing Period.

The Long Basket is rebalanced monthly over a three-day period. Beginning on the First Long Basket Rebalancing Day, and continuing until the second Trading Day following the First Long Basket Rebalancing Day; the weights of the constituents of the Long Basket on the n-th day are set as follows:

$$w_{F+n,0}^{LB,k} = w_{F,C}^{LB,k} + \frac{n \cdot (\widehat{w}_R^{LB,k} - w_{F,C}^{LB,k})}{3}, 0 < n \leq 3$$

where:

F = First Rebalancing Day of the current Rebalancing Period

$w_{F+n,0}^{LB,k}$ = Weight of Basket Component k effective during Trading Day F+n, calculated using the Trading Price as of Business Day F+n-1

$w_{F,C}^{LB,k}$ = Weight of Long Basket Component k at the close of business on Trading Day F, calculated using the Trading Price as of Trading Day F, before any composition changes

$\widehat{w}_R^{LB,k}$ = Target weight of Long Basket Component k for the current Rebalancing Period as submitted by the Constituent Stock Determination Agent

n = n-th Rebalancing Day of the current Rebalancing Period

The first adjustment will be made in September 2017 based on the Trading Prices of the Long Basket Components during the Rebalancing Period.

2.2.3 Ordinary adjustment of the Short Basket

The composition of the Short Basket is adjusted quarterly on the third Friday in March, June, September, and December (the “Short Basket Adjustment Day”)

The first adjustment will be made in September 2017 based on the Trading Prices of the Index Components on the Short Basket Adjustment Day.

2.3 Extraordinary adjustment

An extraordinary adjustment, if applicable, is triggered and applied in compliance with the rules set forth in the [Solactive Guideline for Extraordinary Corporate Actions](#).

3 Calculation of the Index

3.1 Index formula for the Solactive Euro Premia Index

3.1.1 Calculation of the Index Level

The Index Level IL is calculated each Business Day t according to the following formula:

$$IL_t = IL_{t-1} \times \frac{GIL_t}{GIL_{t-1}} \times \left(1 - (SF + RC) \times \frac{DCF}{360} \right)$$

With:

$$IL_t = 100 \text{ for } t \leq t_0$$

Where:

IL_t	= Index Level on Business Day t
GIL_t	= Gross Index Level on Business Day t
GIL_{t-1}	= Gross Index Level on the Business Day immediately preceding Business Day t
SF	= Structuring Fee, i.e. 2% p.a.
RC	= Replication Cost, i.e. 0.25% p.a.
DCF	= Number of Business Days between Business Day t and Business Day $t-1$
t_0	= Index Start Date

3.1.2 Calculation of the Gross Index Level

The Gross Index Level GIL is calculated each Business Day t according to the following formula:

$$GIL_t = GIL_R + \sum_{i=1}^2 Q_{i,R} \times \left(CP_{i,t} - CP_{i,R} \times \frac{CF_t}{CF_R} \right)$$

With:

$$GIL_t = 100 \text{ for } t \leq t_0$$

Where:

GIL_R	= Gross Index Level on the Rebalancing Date R immediately preceding Business Day t
i	= Basket indicator, i.e. $i=1$ Long Basket, $i=2$ Short Basket
$Q_{i,R}$	= Long/Short Basket Quantity on the Rebalancing Date R immediately preceding Business Day t
$CP_{i,t}$	= Long/Short Basket Level on Business Day t
CF_t	= Cash Level on Business Day t

3.1.3 Calculation of the Long/Short Basket Quantity

The Long/Short Basket Quantity Q is calculated each Rebalancing Date R according to the following formula:

$$Q_{i,R} = W_i \times \frac{GIL_{R-3}}{CP_{i,R-3}}$$

With:

$$W_i = \begin{cases} 1, & i = 1 \\ -0.5, & i = 2 \end{cases}$$

Where:

W_i = Long/Short Basket Target Weight

GIL_{R-3} = Gross Index Level on the Business Day three Business Days preceding the Rebalancing Date R immediately preceding Business Day t

CP_{R-3} = Long/Short Basket Level on the Business Day three Business Days preceding the Rebalancing Date R immediately preceding Business Day t

3.1.4 Calculation of the Cash Level

The Cash Level CF is calculated each Business Day t according to the following formula:

$$CF_t = CF_{t-1} \times \left(1 + ER_{t-1} \times \frac{DCF}{360} \right)$$

With:

$$CF_t = 100 \text{ for } t \leq t_0$$

Where:

CF_t = Cash Level on Business Day t

ER_{t-1} = Interest Rate on Business Day t-1

3.2 Index formula for the Long and Short Basket

The Index Value¹ on a Business Day at the relevant time is calculated in accordance with the following formula:

$$CP_{1/2,t} = \sum_{i=1}^n \frac{(x_{i,t} * p_{i,t} * f_{i,t})}{D_t}$$

where:

$x_{i,t}$ = Number of Index Shares of the Index Component i on Trading Day t, calculated according to the following formula:

$p_{i,t}$ = Price of Index Component i on Trading Day t

$f_{i,t}$ = Foreign exchange rate to convert the Price of Index Component i on Trading Day t into the Index Currency

D_t = Divisor on Trading Day t

The initial Divisor on the Start Date is calculated according to the following formula:

$$D_t = \frac{\sum_{i=1}^n (p_{i,t} * f_{i,t} * x_{i,t})}{100}$$

¹ The words "Index" and "Basket" are used synonymously in sections 3.2 - 3.6.2 of this document

After the close of trading on each Long Basket/Short Basket Adjustment Day t the new Divisor is calculated as follows:

If t-1 is a Long/Short Basket Adjustment Day A:

$$D_{t+1} = D_t * \frac{CP_{1/2,t-1}^{Close}}{\sum_{i=1}^n \frac{(x_{i,t} * p_{i,t} * f_{i,t})}{D_t} - [CP_{1/2,t-1}^{Close} * (\sum_{i=1}^m |w_{i,A+1} - w_{i,A}| * TC)]}$$

where:

$CP_{1/2,t-1}^{Close}$ = Long/Short Basket Level as of the close on the Long/Short Basket Adjustment Day A

$w_{i,A}$ = Weight in percent of Index Component i at the close of Long/Short Basket Adjustment Day A immediately preceding Business Day t.

$w_{i,A+1}$ = Target Weight in percent of Index Component i on Long/Short Basket Adjustment Day A immediately at the open of Business Day t.

TC = Transaction Cost in Percent, i.e.

- For the Long Basket: +0.03%
- For the Short Basket: -0.03%

D_t = Divisor on Trading Day t

$x_{i,t}$ = Number of Index Shares of the Index Component i on Trading Day t, calculated according to the following formula:

$p_{i,t}$ = Price of Index Component i on Trading Day t

$f_{i,t}$ = Foreign exchange rate to convert the Price of Index Component i on Trading Day t into the Index Currency

If t-1 is not a Long/Short Basket Adjustment Day A:

$$D_{t+1} = \frac{\sum_{i=1}^n (p_{i,t} * f_{i,t} * x_{i,t+1})}{CP_{1/2,t}}$$

This Divisor is valid starting the immediately following Business Day.

3.2 Accuracy

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

The value of the Long and Short Basket in the calculation of the Index will be rounded to two decimal places.

Trading Prices and foreign exchange rates will be rounded to six decimal places.

Divisors will be rounded to six decimal places

3.3 Adjustments (applied to Long and Short Basket)

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

Following the Committee's decision the Index is adjusted for distributions, capital increases and stock splits.

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 the Index Calculator.

3.4 Dividends and other distributions (applied to Long and Short Basket)

Dividend payments and other distributions are included in the Index. They cause an adjustment of the Divisor. The new Divisor is calculated as follows:

$$D_{t+1} = D_t * \frac{\sum_{i=1}^n (p_{i,t} * f_{i,t} * x_{i,t}) - (x_{i,t} * y_{i,t} * g_{i,t})}{\sum_{i=1}^n (p_{i,t} * f_{i,t} * x_{i,t})}$$

With:

$p_{i,t}$	= Price of Index Component i on Trading Day t
$f_{i,t}$	= Foreign exchange rate to convert the Price of Index Component i on Trading Day t into the Index Currency
$x_{i,t}$	= Number of Index Shares of the Index Component i on Trading Day t
$y_{i,t}$	= Distribution of Index Component i with ex date t+1 multiplied by the Dividend Correction Factor
$g_{i,t}$	= Foreign exchange rate to convert the amount of the distribution of Index Component i on Trading Day t into the Index Currency
D_t	= Divisor on Trading Day t
D_{t+1}	= Divisor on Trading Day t+1

3.5 Corporate actions (applied to Long and Short Basket)

3.5.1 Principles

Following the announcement by an issuer of Index Components of the terms and conditions of a corporate action the Index Calculator determines whether such corporate action has a dilutive, concentrative or similar effect on the price of the respective Index Component.

If this should be the case the Index Calculator shall make the necessary adjustments that are deemed appropriate in order to take into account the dilutive, concentrative or similar 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.

3.5.2 Capital increases

In the case of capital increases with ex date t+1 the Index is adjusted as follows:

$$x_{i,t+1} = x_{i,t} * \frac{1 + B}{1}$$

With:

- $x_{i,t+1}$ = Number of Index Shares of Index Component i on Trading Day t+1
- $x_{i,t}$ = Number of Index Shares of Index Component i on Trading Day t
- B = Shares received for every share held

$$p_{i,t+1} = \frac{p_{i,t} + s * B}{1 + B}$$

With:

- $p_{i,t+1}$ = Hypothetical Price of Index Component i on Trading Day t+1
- $p_{i,t}$ = Price of Index Component i on Trading Day t
- s = Subscription Price in the Index Component currency
- B = Shares received for every share held

$$D_{t+1} = D_t * \frac{\sum_{i=1}^n (p_{i,t} * f_{i,t} * x_{i,t}) + \sum_{i=1}^n [(x_{i,t+1} * p_{i,t+1} * f_{i,t}) - (x_{i,t} * p_{i,t} * f_{i,t})]}{\sum_{i=1}^n (p_{i,t} * f_{i,t} * x_{i,t})}$$

With:

- $D_{i,t+1}$ = Divisor on Trading Day t+1
- $D_{i,t}$ = Divisor on Trading Day t
- $p_{i,t}$ = Price of Index Component i on Trading Day t
- $f_{i,t}$ = Foreign exchange rate to convert the Price of Index Component i on Trading Day t into the Index Currency
- $x_{i,t}$ = Number of Index Shares of the Index Component i on Trading Day t
- $p_{i,t+1}$ = Hypothetical price of Index Component i on Trading Day t+1

$x_{i,t+1}$ = Number of Index Shares of the Index Component i on Trading Day t+1

3.5.3 Share splits

In the case of share splits with ex date on Trading Day t+1 it is assumed that the prices change in ratio of the terms of the split. The new Number of Index Shares is calculated as follows:

$$x_{i,t+1} = x_{i,t} * B$$

With:

$x_{i,t+1}$ = Number of Index Shares of the affected Index Component on Trading Day t+1

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

B = Shares after the share split for every share held before the split

3.5.4 Stock distributions

In the case of stock distributions with ex date on Trading Day t+1 it is assumed that the prices change according to the terms of the distribution. The new Number of Index Shares is calculated as follows:

$$x_{i,t+1} = x_{i,t} * (1 + B)$$

With:

$x_{i,t+1}$ = Number of Index Shares of the affected Index Component on Trading Day t+1

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

B = Shares received for every share held

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](#).

4. Definitions

“**Index Component**” is each share currently included in the Index.

“**Total Shares**” is 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 the Divisor and (B) its Trading Price (converted into the index currency according to the principles laid out in Section 1.4 of this document).

“**Percentage Weight**” of an Index Component is the ratio of its Trading Price multiplied by its Number of Shares divided by the Index value and the Divisor.

“**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.

In particular 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 Adjustment 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 Adjustment 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 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 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 him.

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.

A **“Business Day”** is each weekday except of Saturday and Sunday with the exclusion of January 1, Good Friday, Easter Monday, May 1, Christmas Day and Boxing Day.

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

The **“Index Currency”** is EUR.

“Market Capitalization” is with regard to each of the shares in the Index Universe on a Selection Day or Adjustment Day the value published as the Market Capitalization for this day.

As at the date of this document Market Capitalization is defined as the value of a company calculated by multiplying the number of shares outstanding of the company by its share price.

“Free Float Market Capitalization” is with regard to each of the companies in the Index on a Selection Day the share class specific Free Float Market Capitalization. It is calculated as the multiplication of the Shares Outstanding in Free Float (as sourced from data vendors) multiplied with the closing price of the share class as of the respective (Long/Short Basket) Selection Day.

“Index Start Date” is the 19th July 2002.

“Rebalancing Date” is the third Friday of each month. If the third Friday is not a Business Day, then the immediately following Business Day.

“Short Basket Selection Day” is the Business Day 5 Business Days before Short Basket Adjustment Day.

“Short Basket Adjustment Day” is the third Friday in March, June, September, and December. If such date is not a Business Day, then the immediately following Business Day.

“Long Basket Selection Day” is the Business Day 5 Business Days before the Long Basket Adjustment Day.

“Long Basket Adjustment Day” is the third Friday of each month. If such date is not a Business Day, then the immediately following Business Day

“Interest Rate” is the 3-month Euribor rate as published on Reuters under the RIC “EURIBOR3M=”.

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 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; 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 Trading Day at least one hour before
 - (aa) the actual closing time for normal trading on the Exchange or Affiliated Exchange on the Trading 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 Index concept

Solactive AG
Guiollettstr. 54
60325 Frankfurt
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.