

## **GUIDELINE**

### **Solactive Market Solutions Multi Asset Index**

Version 3.0 dated September 19th, 2017



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This document contains the underlying principles and regulations regarding the structure and the operating of 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 Solactive Market Solutions Multi Asset 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.

## 1 Index specifications

The Solactive Market Solutions Multi Asset Index (the **"Index"**) is an Index of Solactive AG and is calculated and distributed by this provider.

The objective of the Index is to invest in a notional basket of ETP.

In order to control the volatility risks associated with the Index, a volatility control mechanism is built in. When the Index Calculation Agent determines that the volatility of the Index has exceeded the maximum volatility target (the "Maximum Volatility Target") of 4%, then the exposure of the Index to Index Components will be reduced, as appropriate and a corresponding portion of the Index will reference money market assets, with the aim of maintaining the volatility of the Index below the Maximum Volatility Target. Transaction costs incurred in these rebalancings due to the volatility control mechanism will be reflected in the published Index Level and are predetermined.

Certain costs are deducted from the Index Level, which cover, amongst other things, replication and repo costs in running the Index that may vary over time in line with prevailing market conditions. The level of such costs has been determined by the Index Sponsor, acting in a commercially reasonable manner.

The Index is calculated as Net Total Return [NTR]. As a consequence, the level of the index reflects a value assuming reinvestment of all dividends and distributions declared taking withholding taxes of dividends into account.

The Index is published in Euro [EUR].

### 1.1 Index name and identifier

Name	ISIN	Bloomberg Ticker	Currency	Return Type
Solactive Market Solutions Multi Asset Index	DE000SLA2DQ9	SOLMSMA Index	EUR	NTR

### 1.2 Initial value

The Index is based on 100 as at the close of trading on the Index Start Date of 29<sup>th</sup> December 2006.

### 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. 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 Level is calculated using Reuters/WMCO closing spot rates as at 4pm London time.

The Index is calculated every Business Day. 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.

## 1.5 Weighting

On each Portfolio Selection Day each Index Component's Weights of the Index is determined in accordance with the single steps are described in detail in section 2.1.

## 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 Committee shall also decide about the future composition of the 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 if there are regulatory reasons for changing the guidelines.

## 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

Back-tested data prior to the launch of the index is available from 29<sup>th</sup> December 2006. Historical data will be maintained from the launch of the index, **31<sup>st</sup> May 2016**.

## 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.

## 2 Composition of the Index

On the Index Start Date, the Index was comprised of Index Components of the type (each an "**Index Component Type**") and currency denomination set out in the table below:

n	Name	Component Type	ISIN	Reuters RIC	Currency	Exchange
1	iShares USD Treasury Bond 13 UCITS ETF	ETP	IE00B14X4S71	IDBT.L	USD	London Stock Exchange
2	iShares Treasury Bond 37yr UCITS ETF (Acc)	ETP	IE00B3VWN393	CBU7.L	USD	London Stock Exchange
3	LYXOR UCITS ETF EUROMTS 13Y INVESTMENT GRADE DR	ETP	FR0010222224	LYQ2.PA	EUR	Euronext Paris
4	LYXOR UCITS ETF EuroMTS 35Y Investment Grade DR	ETP	FR0010037234	MTB.PA	EUR	Euronext Paris
5	LYXOR UCITS ETF EUROMTS 710Y	ETP	FR0010411439	LMTD.PA	EUR	Euronext Paris
6	iShares USD Corporate Bond UCITS ETF	ETP	IE0032895942	LQDE.L	USD	London Stock Exchange
7	Amundi ETF Euro Corporates UCITS ETF C	ETP	FR0010754119	CC4.PA	EUR	Euronext Paris
8	iShares USD High Yield Corporate Bond UCITS ETF	ETP	IE00B4PY7Y77	IHYU.L	USD	London Stock Exchange
9	AMUNDI ETF EURO HIGH YIELD LIQUID BOND IBOXX UCITS ETF	ETP	FR0011494822	AHYE.PA	EUR	Euronext Paris
10	iShares JP Morgan \$ Emerging Markets Bond UCITS ETF	ETP	IE00B2NPKV68	IEMB.L	USD	London Stock Exchange
11	Lyxor UCITS ETF EuroMTS Inflat	ETP	FR0010174292	MTI.PA	EUR	Euronext Paris
12	iShares \$ TIPS UCITS ETF	ETP	IE00B1FZSC47	ITPS.L	GBP	London Stock Exchange
13	BNP Paribas Easy SP 500 UCITS ETF USD C	ETP	FR0011550177	ESD.PA	USD	Euronext Paris
14	Topix Theam* Easy UCITS ETF	ETP	FR0010713610	EJP.PA	EUR	Euronext Paris

15	Amundi ETF MSCI Emerging Markets UCITS ETF A	ETP	FR0010959676	AEEM.PA	EUR	Euronext Paris
16	BNP Paribas Easy FTSE EPRANAREIT Developed Europe	ETP	LU1291091228	EEP.PA	EUR	Euronext Paris
17	Amundi ETF FTSE 100 UCITS ETF EUR	ETP	FR0010791129	C1U.PA	EUR	Euronext Paris
18	BNP Paribas Easy EURO STOXX 50 UCITS ETF	ETP	FR0012739431	ETDD.PA	EUR	Euronext Paris
19	db x-trackers SMI UCITS ETF DR	ETP	LU0274221281	XSMI.DE	EUR	Not Applicable
20	Lyxor ETF Euro Cash EuroMTS Eonia Investable	ETP	FR0010510800	LYXEUC.PA	EUR	Euronext Paris
21	BNPP Paribas USD EUR Forward Index	Custom Index	XEEXTIDX0184	.BNPIUSEU	EUR	Not Applicable

\*: Topix Theam Easy UCITS ETF has been replaced with AMUNDI ETF JAPAN TOPIX UCITS ETF effective COB 18<sup>th</sup> September 2017 due to the delisting of Topix Theam Easy UCITS ETF on that date.

To determine the Index Levels from the Index Start Date, values of the Index Components and the Index for a period between June 7<sup>th</sup> 2006, the "**Index Initial Data Date**" and the Index Start Date were used to establish the necessary performance history required for the operation of the Index Rules. Not all values for the Index Components were available (or were deemed suitable) from the Index Initial Data Date. Consequently, at any given date prior to the Index Start Date, values for the Index Components and the Index may have been simulated or approximated by or from substitute assets obtained from sources deemed to be appropriate and may include other market indices and excess return versions of the Index Components when available.

## 2.1 Selection of the Index Components

The selection of the Index Components is done in a multi-step procedure in accordance with the formula from the following sections.

### 2.1.1. Gross Weights Calculation

The initial composition of the Index as well as any ongoing adjustment is based on the following rules:

On each **Portfolio Selection Day**, the following calculations are performed:

Calculate a hypothetical Bond Portfolio according to

$$BondPortfolio_t = BondPortfolio_{t-1} * \left[ 1 + \sum_{i=1}^{12} BW_i * \left( \frac{Asset_{i,t}^{EUR}}{Asset_{i,t-1}^{EUR}} - 1 \right) \right]$$

where the Bond Portfolio weighting of Index Component i is as specified in the table below

Index Component i	Bond Portfolio Weights $BW_i$
-------------------	-------------------------------

1	10%
2	10%
3	10%
4	10%
5	10%
6	5%
7	5%
8	5%
9	5%
10	10%
11	10%
12	10%

and  $Asset_{i,t}^{EUR}$  are determined in accordance with Section 3.1.

Calculate hypothetical Equity Portfolio according to

$$EquityPortfolio_t = EquityPortfolio_{t-1} * \left[ 1 + \sum_{i=13}^{19} EW_i * \left( \frac{Asset_{i,t}^{EUR}}{Asset_{i,t-1}^{EUR}} - 1 \right) \right]$$

where the Equity Portfolio weighting of Index Component i is as specified in the table below

Index Component i	Equity Portfolio Weight $EW_i$
13	25%
14	10%
15	20%
16	5%
17	10%
18	25%
19	5%

Calculate 11 different Bond/Equity Portfolios (the Portfolios) according to

$$Portfolio_{j,t} = Portfolio_{j,t-1} * \left[ 1 + BP_j * \left( \frac{BondPortfolio_t}{BondPortfolio_{t-1}} - 1 \right) + EP_j * \left( \frac{EquityPortfolio_t}{EquityPortfolio_{t-1}} - 1 \right) \right]$$

Where  $BP_j$  is the Bond/Equity Portfolio j weighting of Bond Portfolio, as specified in the table below, and  $EP_j$  is the Bond/Equity Portfolio j weighting of Equity Portfolio, as specified in the table below

$Portfolio_j$	Bond weight $BP_j$	Equity weight $EP_j$
Portfolio1	100%	0%
Portfolio2	95%	5%
Portfolio3	90%	10%
Portfolio4	85%	15%
Portfolio5	80%	20%
Portfolio6	75%	25%
Portfolio7	70%	30%
Portfolio8	65%	35%
Portfolio9	60%	40%
Portfolio10	55%	45%
Portfolio11	50%	50%

After these 11 portfolios are calculated, the following three steps are performed:

- Step 1: volatility filter

On each **Portfolio Selection Day**, the 60 days volatility ("**Vol\_histo<sub>j,t</sub>**") is calculated for all the Bond/Equity Portfolios. For any Portfolio, if its 60 days volatility is less than 4%, then this Portfolio is admitted to the next step. If none of the portfolios fit the volatility criteria, the Portfolio<sub>1</sub> is selected.

$$Vol\_histo_{j,t} = \sqrt{Var\_histo_{j,t}}$$

With:

$$Var\_histo_{j,t} = \lambda_{60} * Var_{histo_{j,t-1}} + (1 - \lambda_{60}) * 252 * \left( \frac{Portfolio_{j,t}}{Portfolio_{j,t-1}} - 1 \right) * \left( \frac{Portfolio_{j,t}}{Portfolio_{j,t-1}} - 1 \right)$$

Where:

$$Var\_histo_{j,0} = 10\%$$

$$\lambda_{60} = \left( \frac{1}{2} \right)^{\frac{1}{60}}$$

- Step 2 : past performance filter

The Portfolio with the highest 6 month historical return ("**Return\_histo<sub>j,t</sub>**") is selected. The 6 month historical return is calculated as follows:



$$Return\_histo_{j,t} = \frac{Portfolio_{j,t}}{Portfolio_{j,t-126}}$$

- Step 3 : Gross Weights calculation

Let's denote **Portfolio<sub>j</sub>** the portfolio selected on Step 2. Then for all the Index Level Calculation Dates from the Portfolio Selection Day (included) until the immediately following Portfolio Selection Day (excluded) the Portfolio<sub>j</sub> weights will be applied:

For the Index Components 1 to 12:

$$W_{i,t}^{gross} = BW_i * BP_j$$

For the Index Components 13 to 19:

$$W_{i,t}^{gross} = EW_i * EP_j$$

### 2.1.2. Target Auxiliary Weights Calculation

The Gross Weights as determined in Step 3 above are adjusted to reflect constraints on the maximal move an asset's weights is allowed to make, leading to the Target Auxiliary Weights:

$$W_{i,t}^{target\_aux} = [W_{i,t}^{gross}]_{floor_{i,t}^{aux}}^{cap_{i,t}^{aux}}$$

With

$$cap_{i,t}^{aux} = W_{i,t-1}^{target\_aux} + maxmove_i$$

$$floor_{i,t}^{aux} = \max(0, W_{i,t-1}^{target\_aux} - maxmove_i)$$

$$W_{i,0}^{target\_aux} = 0$$

### 2.1.3. Final Target Weights Calculation

The Target Auxiliary Weights as determined in accordance with the formulae above are adjusted to reach the desired level of exposure according to the following formulae:

$$W_{i,t}^{target\_final} = [Exposure * W_{i,t}^{target\_aux}]_{floor_{i,t}^{final}}^{cap_{i,t}^{final}}$$

with

$$cap_{i,t}^{final} = W_{i,t-1}^{target\_final} + maxmove_i$$

$$floor_{i,t}^{final} = \max(0, W_{i,t-1}^{target\_final} - maxmove_i)$$

$$W_{i,0}^{target\_final} = 0$$

with:

$pb(t,i)$  The last Business Day preceding Index Level Calculation Date  $t$  which is a Reference Index Level Publication Day or Scheduled Trading Day (as appropriate) in respect of each Index Component  $i$ ;

$lag(i)$  2 Business Days;

$maxmove_i$  maximum weight increase between two consecutive Reference Index Level Publication Days or Scheduled Trading Days (as appropriate) for Index Component  $i$  as stated in the table below

Index Component $i$	$maxmove$
1	8%
2	8%
3	8%
4	8%
5	8%
6	2%
7	2%
8	1%
9	2%
10	2%
11	4%
12	6%
13	10%
14	5%
15	2%
16	2%
17	6%
18	10%
19	2%
20	100%

where “Exposure” is determined according to the following:

$$\text{Exposure}_t = \min \left( 1, \frac{\text{vol\_target}}{\max(\text{VolBsk}_{t,20}, \text{VolBsk}_{t,60})} \right)$$

Where

$$\text{VolBsk}_{t,n\_volbsk} = \sqrt{252 * \frac{n\_volbsk}{n\_volbsk - 1} * \left[ \left( \frac{1}{n - volbsk} * \sum_{k=0}^{n\_volbsk-1} \ln(RBsk_{t,t-k})^2 \right) - \left( \frac{1}{n - volbsk} * \sum_{k=0}^{n\_volbsk-1} \ln(RBsk_{t,t-k}) \right)^2 \right]}$$

and

$$RBsk_{t,s} = 1 + \sum_{i=1}^{19} W_{i,t}^{target\_aux} * \left( \frac{Asset_{i,s}^{EUR}}{Asset_{i,s-1}^{EUR}} - 1 \right) + W_{20,t}^{target\_aux} * \left( \frac{Cash_s}{Cash_{s-1}} - 1 \right)$$

Where

$$W_{20,t}^{target\_aux} = 1 - \sum_{i=1}^{19} W_{i,t}^{target\_aux}$$

with:

n_volbsk	basket volatility calculation length, equal to 20 or 60
vol_target	Maximum Volatility Target, which equals 4%

## 3 Calculation of the Index

### 3.1 Hedged Asset Value Calculation

For the Selection of the Index Components (as described in Section 2) and the Index Value Calculation (as described in Section 3.2.) the closing prices of the Index Components are transformed to capture the dividend reinvestment and (depending on the currency the Index Component is denominated in) the currency hedge feature according to the following formulae:

$Asset_{i,t}^{EUR}$  of Index Component 3, 4, 5, 7, 9, 11, 14, 15, 16, 17, 18 and 19 is the daily official closing price of Index Component i after reinvestment of dividends (such value determined in accordance with Section 3.1.1) on Index Level Calculation Date t, as determined by the Index Calculation Agent, where:

if Index Level Calculation Date t does not belong to the Index Component i Reference Holiday Calendar:

$$Asset_{i,t}^{EUR} = Asset_{i,t}^{Curr}$$

else:

$$Asset_{i,t}^{EUR} = Asset_{i,t-1}^{EUR}$$

$Asset_{i,t}^{EUR}$  of Index Components 1, 2, 6, 8, 10 and 12 is the daily official closing price of Index Component i in the Index Currency after reinvestment of dividends (such value determined in accordance with Section 3.1.1) on Index Level Calculation Date t, determined by the Index Calculation Agent in accordance with the following formula:

if Index Level Calculation Date t does not belong to the Index Component i Reference Holiday Calendar:

$$Asset_{i,t+1}^{EUR} = Asset_{i,t}^{EUR} * \left( 1 + \frac{Asset_{i,t+1}^{Curr}}{Asset_{i,t}^{Curr}} * \frac{FX_{t+1}^{Curr}}{FX_t^{Curr}} - \frac{Asset_{21,t+1}^{Curr}}{Asset_{21,t}^{Curr}} \right)$$

;

else :

$$Asset_{i,t}^{EUR} = Asset_{i,t-1}^{EUR}$$

$$Asset_{i,0}^{EUR} = 1$$

$Asset_{i,t}^{EUR}$  of Index Component 13 the daily official closing price of Index Component i in the Index Currency after reinvestment of dividends (such value determined in accordance with Section 3.1.1) on Index Level Calculation Date t, determined by the Index Calculation Agent in accordance with the following formula:

if Index Level Calculation Date t does not belong to the Index Component i Reference Holiday Calendar:

$$Asset_{i,t+1}^{EUR} = Asset_{i,t}^{EUR} \times \left( \frac{Asset_{i,t+1}^{Curr}}{Asset_{i,t}^{Curr}} \times \frac{FX_{t+1}^{Curr}}{FX_t^{Curr}} \right);$$

$$Asset_{i,0}^{EUR} = 1$$

else :

$$Asset_{i,t}^{EUR} = Asset_{i,t-1}^{EUR}$$

Where:

$Asset_{21,t}^{curr}$  means the daily official level of Index Component 21 on Index Level Calculation Date t, as determined by the Index Calculation Agent

$FX_t^{curr}$  means the exchange rate at which the currency in which Index Component i is denominated on Index Level Calculation Date t may be exchanged for the Index Currency.  $FX_t^{GBP}$  is calculated as a cross rate via USD.

Index Component i	Index Component i Reference Holiday Calendar
1	NYSE ARCA and LSE
2	NYSE ARCA and LSE
3	Eurex and Euronext Paris
4	Eurex and Euronext Paris
5	Eurex and Euronext Paris
6	NYSE ARCA and LSE
7	Eurex and Euronext Paris
8	NYSE ARCA and LSE
9	Eurex and Euronext Paris
10	LSE
11	Eurex and Euronext Paris
12	NYSE ARCA and LSE
13	NYSE ARCA and Euronext Paris
14	Tokyo Stock Exchange and Euronext Paris
15	Euronext Paris
16	Eurex and Euronext Paris
17	LSE and Euronext Paris
18	Eurex and Euronext Paris
19	SIX Swiss Exchange and Luxembourg Stock Exchange

### 3.1.1. Calculation of Asset Values

Dividends are reinvested in each Asset i (i=1..19), and the performance recalculated in accordance with the following formula:

$$Asset_{i,0}^{curr} = ETF_{i,0}$$

$$Asset_{i,t}^{curr} = Asset_{i,t-1}^{curr} \times \frac{ETF_{i,t} + d_{i,t} \times \alpha_i}{ETF_{i,t-1}}$$

Where:

$Asset_{i,t}^{Curr}$  the value of Index Component i=1-19, after reinvestment of dividends, determined in accordance with the provisions above;

$ETF_{i,t}$  the daily official closing price of Index Component i=1-19 in its domestic currency on Index Level Calculation Date t as determined by the Index Calculation Agent.

$\alpha_i$  the Reinvestment Rate of the dividend of Index Component i=1-19. As of the date of this Rule Book, the Reinvestment Rates are equal to:

Country of Domicile	Reinvestment rate
Ireland	80.00%
Luxembourg	85.00%
France	70.00%

$d_{i,t}$  the gross dividend paid on Index Level Calculation Date t in respect of Index Component i=1-19 as determined by the Index Calculation Agent

### 3.1.3. Target Quantity Calculation

The Target Quantities are calculated according to the following formulae:

$$n_{i,t}^{\text{target\_final}} = n_{i,t-1}^{\text{target\_final}} \quad \text{if } t + \text{lag}(i) \neq \text{pb}(t + \text{lag}(i), i)$$

else

$$n_{i,t}^{\text{target\_final}} = n_{i,t-1}^{\text{target\_final}} + \left[ W_{i,t}^{\text{target\_final}} \times \frac{Index_t}{Asset_{i,t}^{EUR}} - n_{i,t-1}^{\text{target\_final}} \right]_{-\text{max\_move\_share}_{i,t}}^{\text{max\_move\_share}_{i,t}}$$

With

$$\text{max\_move\_share}_{i,t} = \text{max\_move}_i \times \frac{Index_t}{Asset_{i,t}^{EUR}}$$

### 3.1.4. Used Quantity Calculation

The Used Quantities are calculated according to the following formulae:

$$n_{i,t}^{\text{used}} = n_{i,t-1}^{\text{used}} \quad \text{if } t \neq \text{pb}(t, i)$$

else

$$n_{i,t}^{\text{used}} = n_{i,t-\text{lag}(i)}^{\text{target\_final}}$$

$$n_{\text{cash},t} = \frac{Index_t - \sum_{i=1..19} n_{i,t}^{\text{used}} \times Asset_{i,t}^{EUR}}{Cash_t}$$

### 3.1.5. Costs Calculation

The final index level is calculated taking certain types of costs into account. These costs are calculated according to the following formulae:

$$\begin{aligned} \text{Costs}_{t+1} = & AF \times \frac{Act(t,t+1)}{365} \times Index_t + \sum_i \left| n_{i,t}^{used} - n_{i,t-1}^{used} \right| \times Asset_{i,t}^{EUR} \times exec\_fees_i \\ & + \sum_i \left| n_{cash,t}^{used} - n_{cash,t-1}^{used} \right| \times Cash_t \times exec\_fees_{20} \end{aligned}$$

With:

*AF* Adjustment Factor equal to 0.75%

$\sum_i$  means  $\sum_{i=1}^{19}$

*Act(t,t+1)* The number of calendar days from date t (excluded) to date t+1 (included)

*exec\_fees<sub>i</sub>* Execution fees for Index Component i as stated in the table below

Index Component i	exec_fee
1	0.04%
2	0.04%
3	0.04%
4	0.04%
5	0.04%
6	0.04%
7	0.04%
8	0.04%
9	0.04%
10	0.04%
11	0.04%
12	0.04%
13	0.04%
14	0.04%
15	0.04%
16	0.04%
17	0.04%

18	0.04%
19	0.04%
20	0.04%

### 3.1.6. Index Level Calculation

On any Index Level Calculation Date  $t$ ,

$$Index_{t+1} = Index_t + \sum_i n_{i,t}^{\text{used}} \times (Asset_{i,t+1}^{EUR} - Asset_{i,t}^{EUR}) + n_{cash,t} \times (Cash_{t+1} - Cash_t) - Costs_{t+1}$$

Where:

On the Index Start Date,  $Index_0 = 100$

Where:

$Cash_t$  the daily official closing price of Index Component 20 on Index Level Calculation Date  $t$ , as determined by the Index Calculation Agent,

$n_{i,t}^{\text{used}}$  Used Quantity for Index Component  $i$ , determined in accordance with the Section 3.1.4 (*Used Quantity Calculation*), below;

$n_{cash,t}$  Used Quantity for Index Component 20, determined in accordance with the provisions of Section 3.1.4. (*Used Quantity Calculation*), below;

$Costs$  means the aggregate costs deducted from the Index Level, determined in accordance with Section 3.1.5. (*Cost Calculations*).

### 3.2 Accuracy

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

Trading Prices will be rounded to four decimal places.

FX rates will not be rounded.

### 3.3 Adjustments

If any Index Component ceases to exist or is, or would be, subject to an adjustment pursuant to the provisions of any Appendix hereto, or if the Hedging Party informs the Index Sponsor that a Hedging Disruption Event has occurred in respect of that Index Component, the Index Sponsor (and, where applicable, following consultation with the Index Investment Advisor), acting in good faith and in a commercially reasonable manner, may: (a) require the Index Calculation Agent to (i) effect no change to the Index, (ii) adjust the Index in such manner as the Index Sponsor and, where applicable, the Index Investment Advisor, deem appropriate including, but not limited to, replacing such Index Component with a replacement Index Component, or (iii)



continue to calculate and publish (as applicable) the Index without such Index Component or any replacement therefore, subject to the provisions of Section 3.1. (*Index Calculation*); or (b) if the Index Sponsor determines that none of sub-paragraphs (a)(i) through (iii) are appropriate or practicable, terminate the Index in accordance with its policies and procedures, acting on a best efforts basis.

The aim of the Index Calculation Agent when making any such operational adjustments is to ensure that, so far as possible, the basis principles and economic effect of the Index are maintained.

### 3.5 Corporate actions

#### 3.5.1 Principles

Following the announcement by an ETP 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.

Potential Adjustment Event	Adjustment	Adjustment Description
Cash Dividends	Yes	The Dividend is reinvested in that Underlying ETF.
Special / Extraordinary Dividends	Yes	The Dividend is reinvested in that Underlying ETF.
Return on Capital	Yes	The Dividend is reinvested in that Underlying ETF.
Stock Dividend	Yes	Where shareholders receive "B" new shares for every "A" share held, the number of shares is adjusted by multiplying the original number of shares by the quotient of (a) the sum of A and B divided by (b) A.

Stock Split	Yes	Where shareholders receive “B” new shares for every “A” share held, the number of shares is adjusted by multiplying the original number of shares by the quotient of B divided by A.
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### 3.6 Calculation of the Index in the event of a Market Disruption Event

An Index is not calculated in the event of a Market Disruption Event. If the Market Disruption Event continues over a period of eight Trading Days, the Index Calculator 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

**"Index Component"** is each component listed in Section 2.

**"Business Day"** means any week day in each year.

**"Index Initial Data Date"** is the 7<sup>th</sup> June 2006

**"Index Level Calculation Date"** means each Business Day on which the Index Calculation Agent determines that it is able to calculate the Index Level, based on the availability of the prices, levels or values of the Index Components.

**"Reference Index Level Publication Day"** means each Business Day on which the level of the relevant Reference Index is scheduled to be published by the relevant Reference Index Sponsor.

**"Scheduled Trading Day"** means any day on which the relevant Exchange is scheduled to be open for trading during their respective regular trading session(s)

**"Index Start Date"** is the 29<sup>th</sup> Dec 2006.

**"Index Level"** means the level of the Index on any relevant day

**"Open Banking Day"** means any day on which commercial banks are open for general business (including dealings in foreign exchange and foreign currency deposits) in London, New York, Paris and Luxembourg

**"Portfolio Selection Day"** means the 4th Tuesday of each month, or if such day is not an Open Banking Day, the immediately following Open Banking Day.

**"Publication Date"** means the first Business Day following each Index Level Calculation Date.

**"Exchange"** is, in respect of the Selection Pool 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 Scheduled Trading Day is the closing price on this Scheduled 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.

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

The **"Index Currency"** is Euro.

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

1. one of the following events occurs or exists on a Scheduled 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 Scheduled Trading Day at least one hour before
  - (aa) the actual closing time for normal trading on the Exchange or Affiliated Exchange on the Scheduled 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.

## **5.1 Contact data**

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## **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.