

INDEX GUIDELINE

Momentum Indices

Version 1.0

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INTRODUCTION

This document (the "**GUIDELINE**") is to be used as a guideline with regard to the composition, calculation and maintenance of the Momentum Index (the "Index") and Momentum Base Index (the "Base Index" and together, the "Indices"). Any amendments to the rules made to the GUIDELINE are approved by the OVERSIGHT COMMITTEE specified in Section 4.2. The INDICES are owned, administered, and published by Solactive AG ("**SOLACTIVE**") assuming the role as administrator (the "**INDEX ADMINISTRATOR**") under the Regulation (EU) 2016/1011 (the "**BENCHMARK REGULATION**" or "**BMR**"). The name "Solactive" is trademarked.

The text uses defined terms which are formatted with "SMALL CAPS". Such Terms shall have the meaning assigned to them as specified in Section 6 (Definitions).

The GUIDELINE and the policies and methodology documents referenced herein contain the underlying principles and rules regarding the structure and operation of the INDEX. SOLACTIVE does not offer any explicit or tacit guarantee or assurance, neither pertaining to the results from the use of the INDICES nor the level of the INDICES at any certain point in time nor in any other respect. SOLACTIVE strives to the best of its ability to ensure the correctness of the calculation. There is no obligation for SOLACTIVE – irrespective of possible obligations to issuers – to advise third parties, including investors and/or financial intermediaries, of any errors in the INDEX. The publication of the INDEX by SOLACTIVE does not constitute a recommendation for capital investment and does not contain any assurance or opinion of SOLACTIVE regarding a possible investment in a financial instrument based on this INDICES.



1. INDEX SPECIFICATIONS

1.1. SCOPE OF THE INDEX

The Momentum Indices are investible indices that provide a long-short exposure to a diversified range of asset classes including equities, bonds, and commodities. Exposure to different asset classes is allocated according to a dynamic allocation mechanism that comprises:

- (i) cross-sectional momentum,
- (ii) a monthly inverse volatility weighting,
- (iii) a monthly target volatility of 5% volatility budget, and, where applicable, (iv) a daily volatility control of 5%.

1.2. IDENTIFIERS AND PUBLICATION

Each INDEX is published under the following identifiers:

Name	ISIN	Currency	Type	BBG ticker	Index Fee
Momentum Base Index	TBD	USD	NTR	CSEAMTMB Index	0.50%
Momentum Index	TBD	USD	NTR	CSEAMTM5 Index	0.50%

Each INDEX is published on the website of the INDEX ADMINISTRATOR (www.solactive.com) and is, in addition, available via the price marketing services of Boerse Stuttgart GmbH and may be distributed to all of its affiliated vendors. Each vendor decides on an individual basis as to whether it will distribute or display the INDICES via its information systems.

Any publication in relation to the INDICES (e.g. notices, amendments to the GUIDELINE) will be available at the website of the INDEX ADMINISTRATOR: <https://www.solactive.com/news/announcements/>.

1.3. INITIAL LEVEL OF THE INDEX

The initial level of the INDEX on March 31, 2000, the START DATE, is 1000. Historical values from the START DATE to the TRANSITION DATE have been calculated by Credit Suisse International. The Live Date of the index is February 12, 2020. The closing levels of the Index from the TRANSITION DATE are calculated by Solactive and, will be recorded in accordance with Article 8 of the BMR. Levels of the INDEX published for a period prior to the LIVE DATE have been back-tested.



1.4. PRICES AND CALCULATION FREQUENCY

The closing level of the INDEX for each CALCULATION DAY is calculated. This closing level is based on the CLOSING PRICES for the INDEX COMPONENTS as published by their respective index provider on which the INDEX COMPONENTS are listed. The CLOSING PRICES of INDEX COMPONENTS not listed in the INDEX CURRENCY are converted using the 4pm London time WM Fixing quoted by Refinitiv. If there is no 4pm London time WM Fixing for the relevant CALCULATION DAY, the last available 4pm London time WM Fixing will be used for the closing level calculation.

1.5. LICENSING

Licenses to use the INDEX as the underlying value for financial instruments, investment funds and financial contracts may be issued to stock exchanges, banks, financial services providers, and investment houses by Solactive AG ("**SOLACTIVE**")



2. INDEX COMPOSITION

2.1. INDEX COMPONENTS

Effective from and including the TRANSITION DATE, the following 12 components ("New Components") will serve as INDEX COMPONENT in the calculation of the INDEX:

i	Index Component (i)	Currency	Asset Type	Volatility Floor	Min Allocation	Max Allocation
1	UBS Market Beta US Equity Index	USD	Long-Short Asset	8%	-5.00%	15%
2	UBS Market Beta Europe Equity Index ER EU EUR	EUR	Long-Short Asset	8%	-5.00%	15%
3	UBS Market Beta UK Equity Index	GBP	Long-Short Asset	8%	-5.00%	15%
4	UBS Market Beta Japan Equity Index JP ER JPY	JPY	Long-Short Asset	8%	-5.00%	15%
5	UBS 10Y US Treasuries Index	USD	Long-Short Asset	4%	-13.33%	40%
6	UBS 10Y German Bond Index	EUR	Long-Short Asset	4%	-13.33%	40%
7	UBS Market Beta UK 10Y Bond Index	GBP	Long-Short Asset	4%	-13.33%	40%
8	UBS Market Beta Japan 10Y Bond Index	JPY	Long-Short Asset	4%	-13.33%	40%
9	WTI Component Solactive Future Series 5-Day Roll WTI Crude Oil Excess Return USD or UBS Commodity Benchmark WTI Light Crude Oil 4x6F Segment Excess Return Index	USD	Long-Short Asset	8%	-5.00%	15%
10	Gold Component: Solactive Future Series 5-Day Roll Gold Excess Return USD Index or UBS	USD	Long-Short Asset	8%	-5.00%	15%



	Commodity Benchmark Gold 4x6F Segment Excess Return Index					
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With the following 12 components ("Old Components") (each of them an INDEX COMPONENT, together the INDEX COMPONENTS) only effective up to but excluding TRANSITION DATE:

i	Index Component (i)	Currency	Asset Type	Volatility Floor	Min Allocation	Max Allocation
1	CS US Equity Futures Index	USD	Long-Short Asset	8%	-5.00%	15%
2	CS European Equity Futures Index	EUR	Long-Short Asset	8%	-5.00%	15%
3	CS UK Equity Futures Index	GBP	Long-Short Asset	8%	-5.00%	15%
4	CS Japanese Equity Futures Index	JPY	Long-Short Asset	8%	-5.00%	15%
5	CS US 10Y Treasury Futures Index	USD	Long-Short Asset	4%	-13.33%	40%
6	CS Bund Futures Index	EUR	Long-Short Asset	4%	-13.33%	40%
7	CS Gilt Futures Index	GBP	Long-Short Asset	4%	-13.33%	40%
8	CS JGB Futures Index	JPY	Long-Short Asset	4%	-13.33%	40%
9	WTI Component Credit Suisse Multi-Asset Futures – Oil Excess Return Index or UBS Commodity Benchmark WTI Light Crude Oil 4x6F Segment Excess Return	USD	Long-Short Asset	8%	-5.00%	15%
10	Gold Component:	USD	Long-Short Asset	8%	-5.00%	15%



	Credit Suisse Multi-Asset Futures – Gold Excess Return Index or UBS Commodity Benchmark Gold 4x6F Segment Excess Return Index					
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For the avoidance of doubt, on any Calculation Day on and after the Transition Date, the new Index Components (“New Components”) will be used for the purposes of calculations defined in Section 4 and 5. The calculation of all the intermediary values that rely on the use of historical values shall use the historical values of the (“New Components”) indices even if those historical dates precede the Transition Date.

2.2. LONG AND SHORT INDEX COMPONENTS

i	Short Index Component i	Short Bloomberg Ticker	Long Index Component i	Long Bloomberg Ticker
1	UBS Market Beta US Equity Index	UISEMULL	UBS Market Beta US Equity Index	UISEMULL
2	UBS Market Beta Europe Equity Index ER EU EUR	UISEMEER	UBS Market Beta Europe Equity Index ER EU EUR	UISEMEER
3	UBS Market Beta UK Equity Index	UISEMLLE	UBS Market Beta UK Equity Index	UISEMLLE
4	UBS Market Beta Japan Equity Index JP ER JPY	UISEMJLE	UBS Market Beta Japan Equity Index JP ER JPY	UISEMJLE
5	UBS 10Y US Treasuries Index	MLTAU10E	UBS 10Y US Treasuries Index	MLTAU10E
6	UBS 10Y German Bond Index	MLTAG10E	UBS 10Y German Bond Index	MLTAG10E



7	UBS Market Beta UK 10Y Bond Index	UISRMLIE	UBS Market Beta UK 10Y Bond Index	UISRMLIE
8	UBS Market Beta Japan 10Y Bond Index	MLTAJ10E	UBS Market Beta Japan 10Y Bond Index	MLTAJ10E
9	Solactive Future Series 5-Day Roll WTI Crude Oil Excess Return USD Index	SOF5CLS0	UBS Commodity Benchmark WTI Light Crude Oil 4x6F Segment Excess Return	CSIXCLE2
10	Solactive Future Series 5-Day Roll Gold Excess Return USD Index	SOF5GCS0	UBS Commodity Benchmark Gold 4x6F Segment Excess Return Index	CSIXGCE2

2.3. INDEX COMPONENTS ASSET CLASSES AND COSTS

i	Index Component i	Asset Class	Asset Class Cap	Holding Fee	Transaction Cost
1	UBS Market Beta US Equity Index	Equity	40%	0.15%	0.05%
2	UBS Market Beta Europe Equity Index ER EU EUR	Equity	40%	0.18%	0.05%
3	UBS Market Beta UK Equity Index	Equity	40%	0.18%	0.05%
4	UBS Market Beta Japan Equity Index JP ER JPY	Equity	40%	0.15%	0.05%
5	UBS 10Y US Treasuries Index	Treasury	100%	0.10%	0.02%



6	UBS 10Y German Bond Index	Treasury	100%	0.20%	0.02%
7	UBS Market Beta UK 10Y Bond Index	Treasury	100%	0.125%	0.02%
8	UBS Market Beta Japan 10Y Bond Index	Treasury	100%	0.15%	0.02%
9	Solactive Future Series 5-Day Roll WTI Crude Oil Excess Return USD Index	Commodity	10%	0.25%	0.05%
10	Solactive Future Series 5-Day Roll Gold Excess Return USD Index	Commodity	10%	0.25%	0.05%
11	UBS Commodity Benchmark WTI Light Crude Oil 4x6F Segment Excess Return	Commodity	10%	0.25%	0.05%
12	UBS Commodity Benchmark Gold 4x6F Segment Excess Return Index	Commodity	10%	0.25%	0.05%



3. INDEX CALCULATION

3.1. INDEX FORMULA

The level of the INDEX is calculated according to the following formula:

On the START DATE:

$$Index_{ISD} = 1000$$

On each CALCULATION DAY t following the START DATE:

$$Index_t = Index_{t-1} * \left(1 - Fee \times \frac{D_{t-1,t}}{365} \right) + Perf_{t-1,t} - RC_{t-1}$$

Where:

Index_t: The level of the INDEX as of CALCULATION DAY t;

Index_{t-1}: The level of the INDEX as of CALCULATION DAY t-1;

Perf_{t-1,t}: The Index Performance from CALCULATION DAY t-1 to CALCULATION DAY t;

Fee: The Index Fee as defined in Section 1.2;

DC_{t-1,t}: The number of calendar days between CALCULATION DAY t (including) and CALCULATION DAY t-1 (excluding);

RC_{t-1}: The Index Rebalancing Cost as of CALCULATION DAY t-1;

ISD : The START DATE.

3.2. INDEX REBALANCING COST

The Index Rebalancing Cost is calculated according to the following formula:

On the START DATE:

$$RC_{ISD} = 1000$$

On each CALCULATION DAY t following the START DATE:



$$RC_t = |N_t - N_{t-1}| \times \sum_{i=1}^n (TC_i \times |BaseN_{i,t}| \times AIC_{i,t} \times FX_{i,t})$$

Where:

RC_t : The Index Rebalancing Cost as of CALCULATION DAY t.

TC_i : The Transaction Cost for Index Component i, as specified in 2.3;

$BaseN_{i,t}$: The Number of Units of Index Component i in the Base Index as of CALCULATION DAY t.

$AIC_{i,t}$: The Adjusted Index Component Value of Index Component i as of CALCULATION DAY t, being the Long Index Component Value of Index Component i if $BaseN_{i,t} > 0$, otherwise the Short Index Component Value of Index Component i;

$FX_{i,t}$: The Index Currency/CCY; FX Rate of Index Component i calculated as of CALCULATION DAY t,

CCY_i : The Currency of Index Component i, as specified in 2.1,

N_t : The Number of Index Units as of CALCULATION DAY t.

N_{t-1} : The Number of Index Units as of CALCULATION DAY t-1.

n : The Number of Index Components in the Index Composition.

3.3. INDEX PERFORMANCE

The Index Performance from CALCULATION DAY t-1 immediately preceding CALCULATION DAY t to CALCULATION DAY t is calculated according to the following formula:

$$Perf_{t-1,t} = N_{t-1} \times (BaseIndex_t - BaseIndex_{t-1})$$

Where:

$Perf_{t-1,t}$: The Index Performance from CALCULATION DAY t-1 to CALCULATION DAY t.

$BaseIndex_t$: The level of the BASE INDEX as of CALCULATION DAY t

$BaseIndex_{t-1}$: The level of the BASE INDEX as of CALCULATION DAY t-1

N_{t-1} : The Number of Index Units as of CALCULATION DAY t-1.

3.4. INDEX UNITS

The Number of Index Units as of CALCULATION DAY t is calculated according to the following formula:



On the START DATE:

$$N_{ISD} = Exp_{ISD} \times \frac{Index_{ISD}}{BaseIndex_{ISD}}$$

On each CALCULATION DAY t following the START DATE which is an Index Rebalancing Day or a Volatility Control Rebalancing Day, thereafter:

$$N_t = Exp_t \times \frac{Index_{t-Lag}}{BaseIndex_{t-Lag}}$$

On each CALCULATION DAY t following the START DATE which is not an Index Rebalancing Day neither a Volatility Control Index Rebalancing Day, thereafter:

$$N_t = N_{t-1}$$

Where:

N_t : The Number of Index Units as of CALCULATION DAY t .

Exp_t : The Index Exposure as of CALCULATION DAY t ;

$Index_t$: The level of the INDEX as of CALCULATION DAY $t - Lag$.

$BaseIndex_t$: The level of the BASE INDEX as of CALCULATION DAY $t - Lag$.

Lag : Two CALCULATION DAYS.

3.5. INDEX EXPOSURE

The Index Exposure of Index Units as of CALCULATION DAY t is calculated according to the following formula:

On the START DATE:

$$Exp_{ISD} = \min \left(MaxExp, \frac{TargetVol}{RealisedVol_{ISD}} \right)$$

On any CALCULATION DAY t following the START DATE, which is a Volatility Control Rebalancing Day, therefore:

$$Exp_t = \min \left(MaxExp, \frac{TargetVol}{RealisedVol_t} \right)$$

Otherwise:

$$Exp_t = Exp_{t-1}$$

Where:



Exp_t: The Index Exposure as of CALCULATION DAY t.

Exp_{t-1}: The Index Exposure as of CALCULATION DAY t-1.

MaxExp: The Maximum Exposure Allocation of 100%.

TargetVol: The Target Volatility Control of 5%.

RealisedVol_t: The Index Realized Volatility as of CALCULATION DAY t.

3.6. INDEX REALISED VOLATILITY

The Index Realized Volatility as of CALCULATION DAY t is calculated according to the following formula:

$$RealisedVol_t = \sqrt{\frac{240}{20} \times \sum_{k=0}^{19} (Return_{t-k-lag})^2}$$

Where:

RealisedVol_t: The Index Realized Volatility as of CALCULATION DAY t.

Return_{t-k-lag}: The Index Return as of CALCULATION DAY t – k – lag.

3.7. INDEX RETURN

The Index Return as of CALCULATION DAY t is calculated according to the following formula:

On the START DATE:

$$Return_{ISD} = \frac{VC}{\sqrt{240}}$$

On any CALCULATION DAY t following the START DATE, therefore:

$$Return_t = \ln\left(\frac{BaseIndex_t}{BaseIndex_{t-1}}\right)$$

Where:

Return_t: The Index Return as of CALCULATION DAY t.



4. BASE INDEX CALCULATION

4.1. BASE INDEX FORMULA

The level of the Base INDEX as of CALCULATION DAY t is calculated according to the following formula:

On the START DATE:

$$BaseIndex_{ISD} = 1000$$

On each CALCULATION DAY t following the START DATE:

$$BaseIndex_t = BaseIndex_{t-1} + BasePerf_{t-1,t} - BaseRC_{t-1} - AAF_{t-1,t}$$

Where:

$BaseIndex_t$: The level of the Base INDEX as of CALCULATION DAY t

$BaseIndex_{t-1}$: The level of the Base INDEX as of CALCULATION DAY t-1

$BasePerf_{t-1,t}$: The Base Index Performance from CALCULATION DAY t-1 to CALCULATION DAY t.

$BaseRC_{t-1}$: The Base INDEX Rebalancing Cost as of CALCULATION DAY t-1.

$AAF_{t-1,t}$: The Aggregate Access Fee from CALCULATION DAY t-1 to CALCULATION DAY t.

4.2. AGGREGATE ACCESS FEE

The Aggregate Access Fee as of CALCULATION DAY t is calculated according to the following formula:

$$AAF_{t-1,t} = \sum_{i=1}^n (|BaseN_{i,t-1}| \times AIC_{i,t-1} \times FX_{i,t-1} \times HF_i) \times \frac{D_{t-1,t}}{365}$$

Where:

$AAF_{t-1,t}$: The Aggregate Access Fee from CALCULATION DAY t-1 to CALCULATION DAY t.

HF_i : The Holding Fees for Index Component i, as specified in 2.3;

$BaseN_{i,t-1}$: The Number of Units of Index Component i in the Base Index as of CALCULATION DAY t-1.



$AIC_{i,t-1}$: The Adjusted Index Component Value of Index Component i as of CALCULATION DAY $t-1$, being the Long Index Component Value of Index Component i if $BaseN_{i,t_{reb}} > 0$, otherwise the Short Index Component Value of Index Component i ;

$FX_{i,t-1}$: The Index Currency/CCY; FX Rate of Index Component i calculated as of CALCULATION DAY $t-1$,

n : The Number of Index Components in the Index Composition.

4.3. BASE INDEX PERFORMANCE

The Base Index Performance from CALCULATION DAY $t-1$ immediately preceding CALCULATION DAY t to CALCULATION DAY t is calculated according to the following formula:

$$BasePerf_{t-1,t} = \sum_{i=1}^n BaseN_{i,t-1} \times (AIC_{i,t} - AIC_{i,t-1}) \times FX_{i,t}$$

Where:

$BasePerf_{t-1,t}$: The Base Index Performance from CALCULATION DAY $t-1$ to CALCULATION DAY t

$BaseN_{i,t-1}$: The Number of Units of Index Component i in the Base Index as of CALCULATION DAY $t-1$.

$AIC_{i,t}$: The Adjusted Index Component Value of Index Component i as of CALCULATION DAY t , being the Long Index Component Value of Index Component i if $BaseN_{i,t_{reb}} > 0$, otherwise the Short Index Component Value of Index Component i ;

$AIC_{i,t-1}$: The Adjusted Index Component Value of Index Component i as of CALCULATION DAY $t-1$, being the Long Index Component Value of Index Component i if $BaseN_{i,t_{reb}} > 0$, otherwise the Short Index Component Value of Index Component i ;

$FX_{i,t}$: The Index Currency/CCY; FX Rate of Index Component i calculated as of CALCULATION DAY t ,

t_{Reb} : The Index Rebalancing Day occurring on or immediately before CALCULATION DAY $t-1$;

n : The Number of Index Components in the Index Composition.

4.4. BASE INDEX REBALANCING COST

The Base INDEX Rebalancing Cost as of CALCULATION DAY t is calculated according to the following formula:

On the START DATE:

$$BaseRC_{ISD} = 0$$



On each CALCULATION DAY t following the START DATE:

$$\begin{aligned}
 BaseRC_t = & \left(\sum_{i=1}^7 TC_i \times |BaseN_{i,t-1} - BaseN_{i,t}| \times AIC_{i,t} \times FX_{i,t} \right) \\
 & + \sum_{i=8}^9 (Sign(BaseN_{i,t} \times BaseN_{i,t-1}) \times TC_i \times |BaseN_{i,t-1} - BaseN_{i,t}| \\
 & \times AIC_{i,t} \times FX_{i,t}) \\
 & + \sum_{i=8}^9 ((1 - Sign(BaseN_{i,t} \times BaseN_{i,t-1})) \times TC_i \times (|BaseN_{i,t}| \\
 & \times AIC_{i,t} + |BaseN_{i,t-1}| \times AltAIC_{i,t}) \times FX_{i,t})
 \end{aligned}$$

Where:

$BaseRC_t$: The Base INDEX Rebalancing Cost as of CALCULATION DAY t ;

TC_i : The Transaction Cost for Index Component i , as specified in 2.3;

$Sign(x)$: If x is strictly greater than 0, then equal to 1, otherwise equal to 0;

$BaseN_{i,t}$: The Number of Units of Index Component i in the Base Index as of CALCULATION DAY t ;

$BaseN_{i,t-1}$: The Number of Units of Index Component i in the Base Index as of CALCULATION DAY $t-1$.

$FX_{i,t}$: The Index Currency/CCY; FX Rate of Index Component i calculated as of CALCULATION DAY t ;

$AIC_{i,t}$: The Adjusted Index Component Value of Index Component i as of CALCULATION DAY t , being the Long Index Component Value of Index Component i if $BaseN_{i,t} > 0$, otherwise the Short Index Component Value of Index Component i ;

$AltAIC_{i,t}$: The Alternate Adjusted Index Component Value of Index Component i as of CALCULATION DAY t , being the Short Index Component Value of Index Component i if $BaseN_{i,t} > 0$, otherwise the Long Index Component Value of Index Component i ;

n : The Number of Index Components in the Index Composition.

4.5. BASE INDEX UNITS

The Number of Units of Index Component i in the Base Index as of CALCULATION DAY t are calculated according to the following formula:

On the START DATE:



$$BaseN_{i,ISD} = W_{i,ISD} \times \frac{BaseIndex_{ISD}}{AIC_{i,ISD} \times FX_{i,ISD}}$$

On each CALCULATION DAY t following the START DATE which is an Index Rebalancing Day, thereafter:

$$BaseN_{i,t} = W_{i,t} \times \frac{BaseIndex_{t-lag}}{AIC_{i,t-lag} \times FX_{i,t-lag}}$$

On each CALCULATION DAY t following the START DATE which is not an Index Rebalancing Day, thereafter:

$$BaseN_{i,t} = BaseN_{i,t-1}$$

On the TRANSITION DATE:

$$BaseN_{i_{new},t-1} = BaseN_{i_{old},t-1} \times \frac{AIC_{i_{old},t-1}}{AIC_{i_{new},t-1}}$$

Where:

$BaseN_{i,t}$: The Number of Units of Index Component i in the Base Index as of CALCULATION DAY t;

$BaseN_{i_{old},t-1}$: The Number of Units of Index Component i in the Base Index as of CALCULATION DAY t-1 calculated before and excluding the TRANSITION DATE;

$BaseN_{i_{new},t-1}$: The Number of Units of Index Component i in the Base Index as of CALCULATION DAY t-1 calculated after and including the TRANSITION DATE;

$W_{i,t}$: The Weights of Index Component i in the Base Index as of CALCULATION DAY t;

$AIC_{i,t-lag}$: The Adjusted Index Component Value of Index Component i as of CALCULATION DAY t-lag, being the Long Index Component Value of Index Component i if $W_{i,t_{reb}} > 0$, otherwise the Short Index Component Value of Index Component i;

$AIC_{i_{old},t-1}$: The Adjusted Index Component Value of Index Component i of the ("Old Components") as of CALCULATION DAY t-1, being the Long Index Component Value of Index Component i if $W_{i,t-1_{reb}} > 0$, otherwise the Short Index Component Value of Index Component i of the ("Old Components");

$AIC_{i_{new},t-1}$: The Adjusted Index Component Value of Index Component i of the ("New Components") as of CALCULATION DAY t-1, being the Long Index Component Value of Index Component i if $W_{i,t-1_{reb}} > 0$, otherwise the Short Index Component Value of Index Component i of the ("New Components");



5. REBALANCING METHODOLOGY

5.1. INDEX REBALANCING

Each Index is a weighted basket of the INDEX COMPONENTS.

Each Index is constructed based on a cross-sectional momentum, whereby each Index Component is assigned a moving average ratio, calculated based on the ratio of the 20-CALCULATION DAYS exponential moving average over the 240-CALCULATION DAYS exponential moving average calculated with respect to the Long Index Components.

An inverse volatility weighting targeting a volatility of 5% on a monthly basis subject to a set of investment restrictions, as described in section 5.3.

Each Index refers to an additional daily volatility control level of 5% and is rebalanced on a daily basis with the objective of keeping the volatility of the Index at or below that target threshold, as described in section 3.5

5.1.1. Index Rebalancing Day

The Base Index is rebalanced on each Index Rebalancing Day. With respect to a Base Index, any of the following is deemed to be an Index Rebalancing Day:

- Any Scheduled Rebalancing Day; or
- Any Constant Rebalancing Day

5.1.2. Scheduled Rebalancing Day

The Start date and the last Index Trading Day of each month.

5.1.3. Constant Rebalancing Day

A Constant Rebalancing Day is triggered *Lag* Index Trading Days following an Calculation Day *t* where the following two events happen:

- $\sum_{i=1}^n EW_{i,t}^A \geq \text{ResetLeverage}$, and
- None of the *Lag* CALCULATION DAYS *t* from and including CALCULATION DAY *t* are Index Rebalancing Day.

Where:

EW_t^A : The Effective Weights Ante-Rebalancing;



EW_t^A : Reset Leverage, equal to 400%;

$Lag : 2$

5.1.4. Volatility Control Rebalancing Day

Any CALCULATION DAY t following the START DATE is deemed a Volatility Control Rebalancing Day, if the following three conditions are met:

- $\left| \frac{TargetVol}{RealisedVol_t \times Exp_{t-1}} - 1 \right| \geq TargetVol$ and
- $\min \left(MaxExp, \frac{TargetVol}{RealisedVol_t} \right) \neq Exp_{t-1}$ and
- CALCULATION DAY t is a valid Index Trading Day

5.2. WEIGHTS CALCULATION

The Weights of Index Component i in the Base Index as of CALCULATION DAY t are calculated according to the following formula:

On each CALCULATION DAY t which is a Scheduled Rebalancing Day:

$$W_{i,t_{SReb}} = \begin{cases} TW_{i,t_{SReb}}, & \text{if } \sum_{j=1}^n 1_{Class_i=Class_j} \times |TW_{j,t_{SReb}}| < CCap_i \\ CCap_i \times \frac{TW_{i,t_{SReb}}}{\sum_{j=1}^n 1_{Class_i=Class_j} \times |TW_{j,t_{SReb}}|}, & \text{otherwise} \end{cases}$$

Otherwise, on each CALCULATION DAY t which is not a Scheduled Rebalancing Day, thereafter:

$$W_{i,t} = W_{i,t-1}$$

Where:

$W_{i,t}$: The Weights of Index Component i in the Base Index as of CALCULATION DAY t ;

t_{SReb} : The Scheduled Rebalancing Day occurring on or immediately before CALCULATION DAY $t - 1$;

$Class_i$: The Asset Class of Index Component i , as specified in 2.3;



$CCap_i$: The Asset Class Cap for Class i, as specified in 2.3;

n : The Number of Index Components in the Index Composition.

5.3. TARGET WEIGHTS CALCULATION

The Target Weights of Index Component i in on each Scheduled Rebalancing Day are calculated according to the following formula:

$$TW_{i,t_{SReb}} = \max \left[MinAlloc_i; \min \left(MaxAlloc_i, \frac{Sign_{i,t_{SReb}} \times TargetVol}{\max(Floor, \sqrt{cov_{i,i,t_{SReb}}}) \times AdjustmentFactor_{t_{SReb}}} \right) \right]$$

Where:

$TW_{i,t_{SReb}}$: The Target Weights of Index Component i on the Scheduled Rebalancing Day t_{SReb} ;

$MinAlloc_i$: The minimum allocation to Index Component i, as specified in 2.1.

$MaxAlloc_i$: The maximum allocation to Index Component i, as specified in 2.1.

$Floor_i$: The volatility floor of Index Component i, as specified in 2.1.

$cov_{i,j,t_{SReb}}$: The covariance between Index Component I and Index Component j on the Scheduled Rebalancing Day t_{SReb} .

$Sign_{i,t_{SReb}}$: The Positioning sign either long or short on the Scheduled Rebalancing Day t_{SReb} .

$AdjustmentFactor_{t_{SReb}}$: The Adjustment Factor on the Scheduled Rebalancing Day t_{SReb} .

$TargetVol$: The Target Volatility Control of 5%.

5.4. ADJUSTEMENT FACTOR

The Adjustment Factor on each Scheduled Rebalancing Day is calculated according to the following formula:

$$AdjustmentFactor_{t_{SReb}} = \sqrt{InverseVol_{t_{SReb}} \times COV_{t_{SReb}} \times InverseVol_{t_{SReb}}^T}$$

Where:



$AdjustmentFactor_{t_{SReb}}$: The Adjustment Factor on the Scheduled Rebalancing Day t_{SReb} ;

$InversedVol_{t_{SReb}}$: The Inverse Volatility Vector on the Scheduled Rebalancing Day t_{SReb} ;

$COV_{t_{SReb}}$: The Covariance Matrix on the Scheduled Rebalancing Day t_{SReb} ;

$InverseVol_{t_{SReb}}^T$: The transpose of $InversedVol_{t_{SReb}}$

5.5. INVERSE VOLATILITY VECTOR

The Inverse Volatility Vector on each Scheduled Rebalancing Day is calculated according to the following formula:

$$InverseVol_{t_{SReb}} = \left[\frac{Sign_{1,t_{SReb}}}{\max(Floor_1, \sqrt{cov_{1,1,t_{SReb}}})} \quad \dots \quad \frac{Sign_{n,t_{SReb}}}{\max(Floor_n, \sqrt{cov_{n,n,t_{SReb}}})} \right]$$

Where:

$Sign_{i,t_{SReb}}$: The Positioning sign either long or short on the Scheduled Rebalancing Day t_{SReb} .

$cov_{i,i,t_{SReb}}$: The variance of Index Component i on the Scheduled Rebalancing Day t_{SReb} .

$Floor_i$: The volatility floor of Index Component i , as specified in 2.1.

5.6. COVARIANCE MATRIX

The Covariance Matrix on each Scheduled Rebalancing Day is calculated according to the following formula:

$$COV_{t_{SReb}} = \begin{bmatrix} cov_{1,1,t_{SReb}} & \dots & cov_{1,n,t_{SReb}} \\ \dots & \dots & \dots \\ cov_{n,1,t_{SReb}} & \dots & cov_{n,n,t_{SReb}} \end{bmatrix}$$

Where:

$COV_{t_{SReb}}$: The Covariance Matrix on the Scheduled Rebalancing Day t_{SReb} ;

$cov_{i,j,t_{SReb}}$: The covariance between Index Component i and Index Component j on the Scheduled Rebalancing Day t_{SReb} .



5.6.1. COVARIANCE CALCULATION

The Covariance between Index Component i and Index Component j as of CALCULATION DAY t are calculated according to the following formula:

$$\begin{aligned} cov_{i,j,t} &= \frac{240}{Opt - 1} \\ &\times \sum_{\tau=t-Lag-Opt+1}^{t-Lag} (BaseReturn_{i,\tau} - \overline{BaseReturn}_{i,t}) \\ &\times (BaseReturn_{j,\tau} - \overline{BaseReturn}_{j,t}) \end{aligned}$$

Where:

$cov_{i,j,t}$: The covariance between Index Component i and Index Component j as of CALCULATION DAY t ;

$t - Lag - Opt + 1$: The CALCULATION DAY falling $Lag + Opt - 1$ CALCULATION DAYS before CALCULATION DAY t ;

$BaseReturn_{i,\tau}$: The return of Index Component i on CALCULATION DAY τ ;

$\overline{BaseReturn}_{j,t}$: The average return of Index Component j on CALCULATION DAY t ;

Opt : 60.

5.6.2. INDEX COMPONENT RETURN

The return of Index Component i on CALCULATION DAY t is calculated according to the following formula:

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

Where:

$BaseReturn_{i,t}$: The return of Index Component i on CALCULATION DAY t ;

$LIC_{i,t}$: The official level of Long Index Component i on CALCULATION DAY t . Where the level is not available, the official level of Long Index Component i will be the official level of Long Index Component i with respect to the immediately preceding calendar day for which an official level is available.

$LIC_{i,t-1}$: The official level of Long Index Component i on CALCULATION DAY $t - 1$. Where the level is not available, the official level of Long Index Component i will be the official level of Long Index Component i with respect to the immediately preceding calendar day for which an official level is available.



5.6.3. INDEX COMPONENT AVERAGE RETURN

The Average Return of Index Component i on CALCULATION DAY t is calculated according to the following formula:

$$\overline{BaseReturn}_{j,t} = \sum_{\tau=t-Lag-Opt+1}^{t-Lag} \frac{BaseReturn_{i,\tau}}{Opt_t}$$

Where:

$BaseReturn_{i,t}$: The Return of Index Component i on CALCULATION DAY t ;

Opt : 60.

5.7. POSITIONING DETERMINATION

With respect to any Scheduled Rebalancing Day t_{SReb} , the Index Components are allocated either a long or short position depending on their Moving Average $MARatio_{i,t_{SReb}}$ and their Asset type, which is determined as follow:

- The Index Components with an Asset Type defined as “Long-Only Asset” are allocated a long position: $Sign_{i,t_{SReb}} = 1$;
- The eight Index Components with an Asset Type defined as “Long-Short Asset” with the highest $MARatio_{i,t_{SReb}}$ are allocated a long position: $Sign_{i,t_{SReb}} = 1$
- The two Index Components with an Asset Type defined as “Long-Short Asset” with the smallest $MARatio_{i,t_{SReb}}$ are allocated a short position: $Sign_{i,t_{SReb}} = -1$.

Where there is a perfect equality of moving average ratio between two or more Index Components with an Asset Type defined as “Long-Short Asset”, $Sign_{i,t_{SReb}}$ should take as a value 1 if their moving average ratio is positive, -1 otherwise.¹

5.7.1. EXPONENTIAL MOVING AVERAGE RATIO

The Exponential Moving Average Ratio of Index Component i on CALCULATION DAY t is calculated according to the following formula:

¹ No Index Components have Asset Type defined as “Long-Only Asset”.



$$MARatio_{i,t} = \frac{MA_{i,t-Lag}^{20}}{MA_{i,t-Lag}^{240}} - 1$$

Where:

$MARatio_{i,t}$: The Exponential Moving Average Ratio of Index Component i on CALCULATION DAY t;

$MA_{i,t-Lag}^{20}$: The 20-CALCULATION DAYS Exponential Moving Average of Index Component i on CALCULATION DAY t-lag;

$MA_{i,t-Lag}^{240}$: The 240-CALCULATION DAYS Exponential Moving Average of Index Component i on CALCULATION DAY t-lag;

5.7.2. EXPONENTIAL MOVING AVERAGE

The Exponential Moving Average of Index Component i on CALCULATION DAY t is calculated according to the following formula:

On the COMPUTATION START DATE:

$$MA_{i,CSD}^N = 0$$

On each CALCULATION DAY t following the START DATE:

$$MA_{i,t}^N = \frac{2}{N+1} \times LIC_{i,t} + \left(1 - \frac{2}{N+1}\right) \times MA_{i,t-1}^N$$

Where:

$MA_{i,CSD}^N$: The N-CALCULATION DAYS Exponential Moving Average of Index Component i on COMPUTATION START DATE.

$MA_{i,t}^N$: The N-CALCULATION DAYS Exponential Moving Average of Index Component i on CALCULATION DAY t.

$MA_{i,t-1}^N$: The N-CALCULATION DAYS Exponential Moving Average of Index Component i on CALCULATION DAY t-1;

N : The Number of CALCULATION DAYS over which the Exponential Moving Average is being calculated (being either 20, or 240);



$LIC_{i,t}$: The official level of Long Index Component i on CALCULATION DAY t . Where the level is not available, the official level of Long Index Component i will be the official level of Long Index Component i with respect to the immediately preceding calendar day for which an official level is available.

6. ACCURACY

The level of the INDEX will be rounded to 2 decimal places.

7. RECALCULATION

SOLACTIVE makes the greatest possible efforts to accurately calculate and maintain its indices. However, errors in the determination process may occur from time to time for variety reasons (internal or external) and therefore, cannot be completely ruled out. SOLACTIVE endeavors to correct all errors that have been identified within a reasonable period of time. The understanding of "a reasonable period of time" as well as the general measures to be taken are generally depending on the underlying and is specified in the SOLACTIVE Correction Policy, which is incorporated by reference and available on the SOLACTIVE website: <https://www.solactive.com/documents/correction-policy/>.

8. MARKET DISRUPTION

8.1.1. INDEX DISRUPTION EVENT

Where, in the determination of the INDEX ADMINISTRATOR, an INDEX DISRUPTION EVENT has occurred or is existing and subsisting with respect to any CALCULATION DAY (a "DISRUPTED DAY"), the INDEX ADMINISTRATOR may with respect to such DISRUPTED DAY:

- i- Suspend the calculation and publication of the INDEX; and/or
- ii- Suspend the Rebalancing of the INDEX or affected INDEX COMPONENTS; and/or
- iii- Determine an Index Level on the basis of estimated or adjusted data and publish an estimated level of the INDEX; and/or
- iv- Take any action including but not limited to designation of alternative price sources, reconstitution of the INDEX or a temporary change of Index Weights.

Where the INDEX ADMINISTRATOR uses estimated or adjusted data pursuant to this section, it shall estimate or adjust such data with the primary intention of maintaining, so far as commercially reasonable, consistency of the exposure of the index to the strategy.

In case of any INDEX DISRUPTION EVENT with regard to an INDEX COMPONENT, calculated and administered by a third party, the INDEX ADMINISTRATOR is provided with a respective signal by the INDEX OWNER.



For these purposes, "Index Disruption Event" means a General Disruption Event.

8.1.2. GENERAL DISRUPTION EVENTS

In the determination of the INDEX ADMINISTRATOR, the following events are each a "General Disruption Event":

- a) a closure of the money markets denominated in a relevant currency as determined by the INDEX ADMINISTRATOR other than for ordinary public holidays, or a restriction or suspension in trading in these markets that would materially impact the determination arising in the construction or calculation of the Index and an Index Value;
- b) the failure, suspension or postponement of any calculation within the Index Strategy with respect to any Calculation Day, any event resulting in a breakdown in any means of communication or a procedure normally used to enable the determination of an Index Value, any other event, in the determination of the INDEX ADMINISTRATOR preventing the prompt or accurate determination of an Index Value, or the INDEX ADMINISTRATOR concludes that as a consequence of any such event that the last reported Index Value should not be relied upon; and
- c) the occurrence, with respect to any instrument referenced in the calculation of the INDEX that has a none 0% weight in the composition of the INDEX of (i) any suspension of or limitation imposed on trading by any relevant exchange or other trading facility, (ii) the closure of any relevant exchange or other trading facility before its scheduled closing time, or (iii) any other event that disrupts or impairs, as determined by the INDEX ADMINISTRATOR, the ability of market participants in general to effect transactions in, or obtain market values for, the relevant contract.
- d) the failure of any price source to publish, announce, display, report or disseminate any relevant price, value, level, rate or other data necessary for the determination of the Index Value, the level published on any price source in relation to any price, value, level, rate or other data necessary to determine any Index Value is significantly different to the level of such data prevailing in the market, or a material change by the price source in the content, composition, constitution of, or in the formula for or method of calculating (a "Material Change") any price, value, level, rate or other data necessary to determine any Index Value (including where any such Material Change is due to an amendment or other modification to the rules and/or regulations of the price source).



9. MISCELLANEOUS

9.1. DISCRETION

Any discretion which may need to be exercised in relation to the determination of the INDEX (for example the determination of the INDEX UNIVERSE (if applicable), the selection of the INDEX COMPONENTS (if applicable) or any other relevant decisions in relation to the INDEX) shall be made in accordance with strict rules regarding the exercise of discretion or expert judgement.

9.2. METHODOLOGY REVIEW

The methodology of the INDEX is subject to regular review, at least annually. In case a need of a change of the methodology has been identified within such review (e.g. if the underlying market or economic reality has changed since the launch of the INDEX, i.e. if the present methodology is based on obsolete assumptions and factors and no longer reflects the reality as accurately, reliably and appropriately as before), such change will be made in accordance with the SOLACTIVE Methodology Policy, which is incorporated by reference and available on the SOLACTIVE website: <https://www.solactive.com/documents/methodology-policy/>.

Such change in the methodology will be announced on the SOLACTIVE website under the Section "Announcement", which is available at <https://www.solactive.com/news/announcements/>. The date of the last amendment of this INDEX is contained in this GUIDELINE.

9.3. CHANGES IN CALCULATION METHOD

The application by the INDEX ADMINISTRATOR of the method described in this document is final and binding. The INDEX ADMINISTRATOR 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 and financial or tax reasons may require changes to be made to this method. The INDEX ADMINISTRATOR may also make changes to the terms and conditions of the INDEX and the method applied to calculate the INDEX that it deems to be necessary and desirable in order to prevent obvious or demonstrable error or to remedy, correct or supplement incorrect terms and conditions. The INDEX ADMINISTRATOR is not obliged to provide information on any such modifications or changes. Despite the modifications and changes, the INDEX ADMINISTRATOR will take the appropriate steps to ensure a calculation method is applied that is consistent with the method described above.



9.4. TERMINATION

SOLACTIVE makes the greatest possible efforts to ensure the resilience and continued integrity of its indices over time. Where necessary, SOLACTIVE follows a clearly defined and transparent procedure to adapt Index methodologies to changing underlying markets (see Section 4.2 “Methodology Review”) in order to maintain continued reliability and comparability of the indices. Nevertheless, if no other options are available the orderly cessation of the INDEX may be indicated. This is usually the case when the underlying market or economic reality, which an index is set to measure or to reflect, changes substantially and in a way not foreseeable at the time of inception of the index, the index rules, and particularly the selection criteria, can no longer be applied coherently or the index is no longer used as the underlying value for financial instruments, investment funds and financial contracts.

SOLACTIVE has established and maintains clear guidelines on how to identify situations in which the cessation of an index is unavoidable, how stakeholders are to be informed and consulted and the procedures to be followed for a termination or the transition to an alternative index. Details are specified in the SOLACTIVE Termination Policy, which is incorporated by reference and available on the SOLACTIVE website: <https://www.solactive.com/documents/termination-policy/>.

9.5. OVERSIGHT

An oversight committee composed of staff from SOLACTIVE and its subsidiaries (the “**OVERSIGHT COMMITTEE**”) is responsible for decisions regarding any amendments to the rules of the INDEX. Any such amendment, which may result in an amendment of the GUIDELINE, must be submitted to the OVERSIGHT COMMITTEE for prior approval and will be made in compliance with the Methodology Policy, which is available on the SOLACTIVE website: <https://www.solactive.com/documents/methodology-policy/>.



10. DEFINITIONS

“BENCHMARK REGULATION” shall have the meaning as defined in Section “Introduction”.

“BMR” shall have the meaning as defined in Section “Introduction”.

“CALCULATION DAY” is a day on which New York Stock Exchange (NYSE) are open for trading.

“CLOSE OF BUSINESS” is the calculation time of the closing level of the INDEX as outlined in Section 1.4.

“Computation Start Date” means 08 March 1999.

“DISRUPTED DAY” in respect to any CALCULATION DAY, where INDEX DISRUPTION EVENT has occurred or existing and subsisting.

“FX RATE” : 4pm London time WM Fixing as quoted by Refinitiv.

“GUIDELINE” shall have the meaning as defined in Section “Introduction”.

“INDEX” shall have the meaning as defined in Section “Introduction”.

“INDEX ADMINISTRATOR” shall have the meaning as defined in Section “Introduction”.

“INDEX COMPONENT” is each security according to Section 2.1.

“INDEX COMPONENT CALCULATION DAY” With respect to any Index Component, any day on which the value of such Index Component is scheduled to be published as calculated and reported by its administrator, and as published, announced, displayed, reported and or disseminated by the relevant data provider.

“INDEX CURRENCY” is the currency specified in the column “Currency” in the table in Section 1.2.

“INDEX DISRUPTION EVENT” means a General Disruption Event, or any disruption with respect to an Index Component..

“INDEX UNIVERSE REQUIREMENTS” shall have the meaning as defined in Section 2.1.

“LIVE DATE” shall have the meaning as defined in Section 1.3.

“OVERSIGHT COMMITTEE” shall have the meaning as defined in Section 4.5.

“SOLACTIVE” shall have the meaning as defined in Section “Introduction”.

“START DATE” shall have the meaning as defined in Section 1.3.

“TRADING DAY” is any day:

- (i) on which commercial banks and foreign exchange markets settle payments are open for general business in London and New York City;
- (ii) that is an INDEX COMPONENT CALCULATION Day with respect to all Index Components; and; and
- (iii) (iii) which is a WMR Business Day



“TRANSITION DATE” means June 17, 2024.

“WMR Business Day” means any day on which WMR fixings are published at or around 4 p.m. London time by the WM Company / Reuters Currency Services as indicated on <http://www.wmcompany.com/>

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