

# INDEX GUIDELINE

CACIB MOMENTUM OPTIMAL MULTI-ASSET 7 ESG INDEX

Version 1.6

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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 CACIB Momentum Optimal Multi-Asset 7 ESG Index (the "**INDEX**"). Any amendments to the rules made to the GUIDELINE are approved by the OVERSIGHT COMMITTEE specified in Section 5.6. The INDEX is calculated, 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 INDEX nor the level of the INDEX at any certain point in time nor in any other respect. SOLACTIVE strives to the best of its ability to ensure the correctness of the calculation. There is no obligation for SOLACTIVE – irrespective of possible obligations to issuers – to advise third parties, including investors and/or financial intermediaries, of any errors in the INDEX. The publication of the INDEX by SOLACTIVE does not constitute a recommendation for capital investment and does not contain any assurance or opinion of SOLACTIVE regarding a possible investment in a financial instrument based on this INDEX.**



# 1. INDEX SPECIFICATIONS

## 1.1. SCOPE OF THE INDEX

The CACIB Momentum Optimal Multi-Asset 7 ESG Index aims to provide a systematic exposure to a diversified long-only portfolio composed of up to 7 INDEX COMPONENTS selected across 3 asset classes (4 Equity iShares MSCI ETFs, 2 Fixed Income iShares MSCI ETFs and a Cash Index).

Based on the modern portfolio theory, the INDEX uses momentum monthly to allocate weights in order to maximize returns while targeting an annual volatility level of 7%.

## 1.2. IDENTIFIERS AND PUBLICATION

The INDEX is published under the following identifiers:

Name	ISIN	Currency	Type	RIC	BBG ticker
CACIB Momentum Optimal Multi-Asset 7 ESG Index [ER]	DE000SLOBNMO	EUR	ER*	.CAMOESG7	CAMOESG7 Index

\*ER means that the INDEX is calculated as excess return

The INDEX is published on the website of the INDEX ADMINISTRATOR ([www.solactive.com](http://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 INDEX via its information systems.

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

## 1.3. INITIAL LEVEL OF THE INDEX

The initial level of the INDEX on the 31/12/2013, the START DATE, is 100. Historical values from the 18/12/2020, the LIVE DATE, 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 backtested.

## 1.4. PRICES AND CALCULATION FREQUENCY

The closing level of the INDEX is calculated on each INDEX BUSINESS DAY at 04:50 p.m. EST based on the CLOSING PRICES on the EXCHANGES 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 Reuters. 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 closing level calculation. Should there be no current CLOSING PRICE for an INDEX COMPONENT, the later of: (i) the most recent CLOSING PRICE; or (ii) the last available TRADING PRICE for the preceding TRADING DAY is used in the 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 Crédit Agricole CIB.



## 2. INDEX COMPONENTS

The INDEX is allocated across asset classes and geographies: 3 asset classes (cash, Bonds and Equities), 7 different underlying (6 ETFs managed by iShares MSCI and cash) and 4 geographies (Asia, USA, Europe and Australia).

The table below (Table 2.1) contains a brief description of the 7 ASSETS (each referred to as INDEX COMPONENT, together INDEX COMPONENTS) that the INDEX can select from.

Asset Long Name	CCY	Ticker	Asset Cap	Primary Exchange	Benchmark Long Name
Euribor 3 Month ACT/360	EUR	EUR003M Index	60%	na	na
iShares MSCI Europe SRI UCITS ETF	EUR	IESE NA Equity	30%	Euronext Amsterdam	MSCI Europe SRI Select Reduced Fossil Fuel NET EUR Index
iShares MSCI USA SRI UCITS ETF	USD	SUAS LN Equity	70%	London Stock Exchange	MSCI USA SRI Select Reduced Fossil Fuel NET USD INDEX
iShares MSCI World SRI UCITS ETF	EUR	SUSW LN Equity	70%	London Stock Exchange	MSCI WORLD SRI Select Reduced Fossil Fuel NET USD Index
iShares MSCI Japan SRI UCITS ETF	USD	SUJP LN Equity	20%	London Stock Exchange	MSCI JAPAN SRI Select Reduced Fossil Fuel NET USD Index
iShares EUR Corp Bond ESG UCITS ETF	EUR	SUOE LN Equity	60%	London Stock Exchange	Barclays MSCI Euro Corporate Sustainable SRI Index
iShares ESG Aware US Aggregate Bond ETF	USD	EAGG UP Equity	60%	Nasdaq Stock Exchange	Bloomberg Barclays MSCI US Aggregate ESG Focus

The sum of all ASSET WEIGHTS should sum to 100%.

In order to calculate the INDEX in the INDEX CURRENCY, the FX and interest rates displayed in Table 2.2 below will be used.

Currency	Reference Interest Rate	FX Rate	Source
EUR	EURIBOR3MD=	na	Refinitiv
USD	USD3MFSR=	USD/EUR	Refinitiv



## 3. REBALANCE

### 3.1. INDEX REBALANCE DATE

On each INDEX REBALANCE DATE a portfolio optimization is performed and the INDEX ADMINISTRATOR will revise the composition of the INDEX. The selection of the INDEX COMPONENTS is fully rule-based and the INDEX ADMINISTRATOR has no discretion.

An INDEX REBALANCE DATE is defined as follows:

- On a monthly basis, on the fifth INDEX BUSINESS DAY before the first INDEX BUSINESS DAY of the next month.
- If on any INDEX BUSINESS DAY  $t$  outside a REBALANCE PERIOD and at least three INDEX BUSINESS DAYS before such REBALANCE PERIOD, the PORTFOLIO REALIZED VOLATILITY is larger than **9%** (the "Volatility Trigger") then a volatility triggered INDEX REBALANCE DATE is declared.

The rebalancing of the INDEX is then performed during the REBALANCING PERIOD. The latter is defined as the period of three INDEX BUSINESS DAYS beginning from the first INDEX BUSINESS DAY following the INDEX REBALANCE DATE **D**.

### 3.2. PORTFOLIO REALIZED VARIANCE

On each INDEX BUSINESS DAY  $t$  the PORTFOLIO REALIZED VARIANCE ( $PRV_t$ ) over the past month-long period (21 INDEX BUSINESS DAYS) is calculated as follows:

$$PRV_t = \sum_{i=1}^N \sum_{j=1}^N W_i W_j COV_{i,j,t}$$

Where:

$W_i$  ASSET WEIGHT  $i$  in the portfolio associated with the preceding INDEX REBALANCING DATE **D**.

$W_j$  ASSET WEIGHT  $j$  in the portfolio associated with the preceding INDEX REBALANCING DATE **D**.

$$COV_{i,j,t} = \frac{252}{5 * 20} * \sum_{n=0}^{20} \left( \frac{\left[ \frac{ER_{i,(t-n)}}{ER_{i,(t-n-5)}} - 1 - \frac{1}{21} * \sum_{k=0}^{20} \left( \frac{ER_{i,(t-k)}}{ER_{i,(t-k-5)}} - 1 \right) \right]}{\left[ \frac{ER_{j,(t-n)}}{ER_{j,(t-n-5)}} - 1 - \frac{1}{21} * \sum_{k=0}^{20} \left( \frac{ER_{j,(t-k)}}{ER_{j,(t-k-5)}} - 1 \right) \right]} \right)$$



### 3.3. OPTIMAL PORTFOLIO

On each INDEX REBALANCING DATE a hypothetical portfolio is sampled from the eligible ASSETS and satisfies the Asset Caps as detailed in Table 2.1.

The weight assigned to each ASSET IN in an OPTIMAL PORTFOLIO may be zero or a positive number.

The OPTIMAL PORTFOLIO maximizing returns while targeting a volatility of 7% is selected on each INDEX REBALANCING DATE.

If at any INDEX REBALANCING DATE, no OPTIMAL PORTFOLIO is found as a solution for the optimization done, we can relax the condition on the cash asset by increasing the cap by 5% each time (max 100%) until a solution is found.

### 3.4. DEFINITION OF PORTFOLIO RETURN AND VARIANCE

The expected return of an OPTIMAL PORTFOLIO  $j$  for a specific return period is defined as:

$$\text{Ret}_{j,D}^{\text{NbMonths}} = \sum_{i=1}^N W_{j,i}^{\text{NbMonths}} * \left( \frac{\text{ER}_{i,D}}{\text{ER}_{i,D-k}} - 1 \right)$$

Where:

$\text{Ret}_{j,D}^{\text{NbMonths}}$  Return of the OPTIMAL PORTFOLIO  $j$  over **NbMonths** as of INDEX REBALANCING DATE  $D$ .

$W_{j,i}^{\text{NbMonths}}$  ASSET WEIGHT  $i$  within OPTIMAL PORTFOLIO  $j$ .

$k$  refers to the number of days in the corresponding return period (21 and 63)

The 2 Portfolios ( $P^k$ ) will have 2 different return periods: 1 months and 3 months defined as a 21, and 63 INDEX BUSINESS DAY periods ending on Rebalancing Date  $D$ , respectively.

The Annual Variance of an OPTIMAL PORTFOLIO  $j$  over 126 INDEX BUSINESS DAYS is calculated on INDEX REBALANCING DATE  $D$  as following:

$$\text{Var}_{j,D} = \sum_{i,k=1}^N W_i * W_k * \text{COV}_{i,k}$$



Where:

$W_i$  ASSET WEIGHT  $i$ .

$W_k$  ASSET WEIGHT  $k$ .

$COV_{i,k}$  Covariance between the two ASSETS  $i$  and  $k$  for a period of 126 INDEX BUSINESS DAYS ending at INDEX REBALANCE DATE  $D$ :

$$COV_{i,k} = \frac{252}{5 * (126 - 1)} * \sum_{n=0}^{126-1} \left( \left[ \frac{ER_{i,(D-n)}}{ER_{i,(D-n-5)}} - 1 - \frac{1}{126} * \sum_{j=0}^{126-1} \left( \frac{ER_{i,(D-j)}}{ER_{i,(D-j-5)}} - 1 \right) \right] * \left[ \frac{ER_{k,(D-n)}}{ER_{k,(D-n-5)}} - 1 - \frac{1}{126} * \sum_{j=0}^{126-1} \left( \frac{ER_{k,(D-j)}}{ER_{k,(D-j-5)}} - 1 \right) \right] \right)$$

$n$  Each INDEX BUSINESS DAY within the 126 INDEX BUSINESS DAYS ending at INDEX REBALANCE DATE  $D$ .

### 3.5. WEIGHTING OF THE INDEX COMPONENTS

The ASSET WEIGHT ( $W_i$ ) to be allocated to each ASSET  $i$  during the next REBALANCING PERIOD is defined as the average of the weights of ASSET  $i$  within the 2 OPTIMAL PORTFOLIOS ( $P^k$ ):

$$W_i = \frac{1}{2} * \sum_{k=1}^2 \alpha_i^{NbMonths}$$

$\alpha_i^{NbMonths}$  ASSET WEIGHT  $i$  within portfolio  $P^k$  as of INDEX REBALANCE DATE  $D$ .



## 4. CALCULATION OF THE INDEX

### 4.1. INDEX FORMULA

The INDEX is calculated as an Excess Return Index. On the Index START DATE ( $t=0$ ):

$$I_0 = 100$$

On each INDEX BUSINESS DAY  $t$ , the INDEX will be calculated as follow:

$$I_t = I_{t-1} * \left[ \frac{PV_t}{PV_{t-1}} - Fee * \frac{DC_{t-1,t}}{360} \right]$$

$I_t$	CAMOESG7 Index Value as of INDEX BUSINESS DAY $t$ .
$I_{t-1}$	CAMOESG7 Index Value as of INDEX BUSINESS DAY $t-1$ .
$PV_t$	PORTFOLIO VALUE as of INDEX BUSINESS DAY $t$ .
$PV_{t-1}$	PORTFOLIO VALUE as of INDEX BUSINESS DAY $t-1$ .
$DC_{t-1,t}$	Period from INDEX BUSINESS DAY $t-1$ to INDEX BUSINESS DAY $t$ (excluding $(t-1)$ and including $t$ ).
Fee	0.60% per annum.

### 4.2. PORTFOLIO VALUE

The PORTFOLIO VALUE should be calculated as follows:

- For  $t = D + 1$

$$PV_{D+1} = PV_D * \left[ \frac{2}{3} * \left( \sum_{i=1}^N \frac{W'_i * \left( \frac{ER_{i,D+1}}{ER_{i,D+3}} \right)}{\sum_{j=1}^N W'_j * \left( \frac{ER_{j,D}}{ER_{j,D+3}} \right)} \right) + \frac{1}{3} * \left( \sum_{i=1}^N W_i * \frac{ER_{i,D+1}}{ER_{i,D}} \right) \right]$$

- For  $t = D + 2$



$$PV_{D+2} = PV_{D+1} * \left[ \frac{1}{3} * \left( \sum_{i=1}^N \frac{W'_i * \left( \frac{ER_{i,D+2}}{ER_{i,D'+3}} \right)}{\sum_{j=1}^N W'_j * \left( \frac{ER_{j,D+1}}{ER_{j,D'+3}} \right)} \right) + \frac{2}{3} * \left( \sum_{i=1}^N W_i * \frac{ER_{i,D+2}}{ER_{i,D+1}} \right) \right]$$

- For  $t = D + 3$

$$PV_{D+3} = PV_{D+2} * \left( \sum_{i=1}^N W_i * \frac{ER_{i,D+3}}{ER_{i,D+2}} \right)$$

- For  $D' + 3 < t \leq D$ :

$$PV_t = PV_{D'+3} * \sum_{i=1}^N W'_i * \frac{ER_{i,t}}{ER_{i,D'+3}}$$

Where:

$ER_{i,t}$	ASSET EXCESS RETURN of ASSET $i$ as of INDEX BUSINESS DAY $t$ .
$N$	Total number of ASSET (=7).
$D'$	The immediately preceding INDEX REBALANCE DATE, as defined in the next Section.
$D$	The immediately following INDEX REBALANCE DATE.
$W'_i$	ASSET WEIGHT $i$ in the portfolio associated with INDEX REBALANCE DATE $D'$ .
$W_i$	ASSET WEIGHT $i$ in the portfolio associated with INDEX REBALANCE DATE $D$ .
$PV_{D'+3}$	PORTFOLIO VALUE on Day $D' + 3$ .

We can notice that the REBALANCING PERIOD is defined as the period of three INDEX BUSINESS DAYS beginning from  $D + 1$ .

For 31st December 2013 (the "**START DATE**" and "**Initial REBALANCING DATE**"), the PORTFOLIO Value is 100.

On the START DATE, there is an initial REBALANCING PERIOD, that is not smoothed over three INDEX BUSINESS DAYS. Rather the first weights from INDEX BUSINESS DAY 1 are applied and the calculation for the first month uses  $D'$  instead of  $D' + 3$  as for this specific period we have done the whole rebalancing from INDEX BUSINESS DAY 1.



### 4.3. ASSET EXCESS RETURN

ASSET EXCESS RETURN of each ETF: ( $ER_{i,t}$ ) is calculated by the INDEX ADMINISTRATOR and expressed in the INDEX CURRENCY as follows:

$$ER_{i,0} = 100$$

$$ER_{i,t} = ER_{i,t-1} \times \left( 1 + \left( \frac{ER_{i,t}^{Cur}}{ER_{i,t-1}^{Cur}} - 1 \right) \times \frac{FX_{i,t}}{FX_{i,t-1}} \right)$$

With

$$ER_{i,0}^{Cur} = 100$$

$$ER_{i,t}^{Cur} = ER_{i,t-1}^{Cur} \times \left( \frac{P_{i,t} + d_{i,t} * Reinvestment Rate_i}{P_{i,t-1}} - r_{i,t-1} \frac{Days_{t-1,t}}{360} \right)$$

Where:

$r_{i,t-1}$  means the value of the Reference Interest Rate corresponding to the currency of the ASSET i, as described in the Table 2.2, on the INDEX BUSINESS DAY t-1.

$P_{i,t}$  Price of the ASSET i on the INDEX BUSINESS DAY t.

$d_{i,t}$  means the gross dividend paid on INDEX BUSINESS DAY t in respect of the ASSET i.

*Reinvestment Rate<sub>i</sub>* means Reinvestment Rate of the dividend of the ASSET i. As of the date of this GUIDELINE, the Reinvestment Rates are equal to:

Country of Domicile	Reinvestment rate
Ireland	80.00%
United States	70.00%

$FX_{i,t}$  means the value of the FX Rate corresponding to the currency of the ASSET i on the INDEX BUSINESS DAY t relative to the INDEX CURRENCY, as described in Table 2.2. If an ASSET currency is in the INDEX CURRENCY, such rate shall be fixed at 1.

The ASSET EXCESS RETURN of the cash asset is worth for each INDEX BUSINESS DAY t:

$$ER_{Cash,t} = 100$$



## 4.4. BACKTESTING AND DATA

To complete the missing data for a specific ETF, we complete our time series with the data from the underlying benchmark for backtesting purposes. Indeed, we deduce a fee (given in the Table 4.1 below) from the daily total return of the benchmark.

$$P_t^{\text{Etf}} = P_t^{\text{Etf}} * \left( \frac{P_t^{\text{Benchmark}}}{P_{t-1}^{\text{Benchmark}}} - \text{Fee} * \frac{\text{Days}_{t-1,t}}{360} \right)$$

$P_t^{\text{Etf}}$  Price of the ETF on the INDEX BUSINESS DAY t.

$P_t^{\text{Benchmark}}$  Price of the Benchmark on the INDEX BUSINESS DAY t.

$P_0^{\text{Etf}}$  = 100.

Asset Long Name	Ticker	Fee (per annum)	Benchmark Ticker
iShares MSCI Europe SRI UCITS ETF	IESE NA Equity	0.20%	NE727461 Index
iShares MSCI USA SRI UCITS ETF	SUAS LN Equity	0.20%	NU727459 Index
iShares MSCI World SRI UCITS ETF	SUSW LN Equity	0.20%	NU727463 Index
iShares MSCI Japan SRI UCITS ETF	SUJP LN Equity	0.20%	NU727462 Index
iShares EUR Corp Bond ESG UCITS ETF	SUOE LN Equity	0.15%	LBEATREU Index
iShares ESG Aware US Aggregate Bond ETF	EAGG UP Equity	0.10%	LBUSTRUU Index

## 4.5. ACCURACY

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

## 4.6. 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/>.

#### 4.7. MARKET DISRUPTION

In periods of market stress SOLACTIVE calculates its indices following predefined and exhaustive arrangements as described in the Solactive Disruption Policy, which is incorporated by reference and available on the SOLACTIVE website: <https://www.solactive.com/documents/disruption-policy/>. Such market stress can arise due to a variety of reasons, but generally results in inaccurate or delayed prices for one or more INDEX COMPONENTS. The determination of the INDEX may be limited or impaired at times of illiquid or fragmented markets and market stress.



## 5. MISCELLANEOUS

### 5.1. 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.

### 5.2. 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.

### 5.3. 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.



## 5.4. DISCONTINUATION OF ONE OF THE INDEX COMPONENTS

In case any of the INDEX COMPONENTS is terminated, it will be replaced with another ETF from iShares. The substituting component should have the identical benchmark (or very close), a similar minimum AUM, the same currency as well as similar running costs. The selection will be suggested by the Index Designer and needs to be approved by the index committee composed of staff from Solactive and its subsidiaries (the "INDEX COMMITTEE").

A discontinuation of one of the INDEX COMPONENTS is defined as the occurrence as determined by the Calculation Agent, of any of the following events (each an **Extraordinary Event**) on or after the Trade Date:

- (i) **Closure of the ETF** means liquidation, winding up or dissolution of the ETF for any reason other than those mentioned in (iv) below;
- (ii) **ETF Adviser Event** means that the Calculation Agent determines that over a period of twelve months, the total value of the assets managed by the ETF Adviser (including the ETF) has decreased by 50 percent (either due to redemptions or decrease in value of such assets);
- (iii) **ETF Insolvency Event** means in respect of any ETF, that such ETF (A) is dissolved or has a resolution passed for its dissolution, winding-up, official liquidation (other than pursuant to a consolidation, amalgamation or merger); (B) makes a general assignment or arrangement with or for the benefit of its creditors, (C) (I) institutes or has instituted against it, by a regulator, supervisor or any similar official with primary insolvency, rehabilitative or regulatory jurisdiction over it in the jurisdiction of its incorporation or organisation or the jurisdiction of its head or home office, a proceeding seeking a judgment of insolvency or bankruptcy or any other relief under any bankruptcy or insolvency law or other similar law affecting creditors' rights, or a petition is presented for its winding-up or liquidation by it or such regulator, supervisor or similar official, or (II) has instituted against it a proceeding seeking a judgment of insolvency or bankruptcy or any other relief under any bankruptcy or insolvency law or other similar law affecting creditors' rights, or a petition is presented for its winding-up or liquidation, and such proceeding or petition is instituted or presented by a person or entity not described in clause (i) above and either (1) results in a judgment of insolvency or bankruptcy or the entry of an order for relief or the making of an order for its winding-up or liquidation or (2) is not dismissed, discharged, stayed or restrained in each case within fifteen days of the institution or presentation thereof; (D) seeks or becomes subject to the appointment of an administrator, provisional liquidator, conservator, receiver, trustee, custodian or other similar official for it or for all or substantially all its assets; (E) has a secured party take possession of all or substantially all its assets or has a distress, execution, attachment, sequestration or other legal process levied, enforced or sued on or against all or substantially all of its assets and such secured party maintains possession, or



any such process is not dismissed, discharged, stayed or restrained, in each case within fifteen days thereafter; or (F) causes or is subject to any event with respect to it which, under the applicable laws of any jurisdiction, has an analogous effect to any of the events specified in clauses (A) through (E) above;

- (iv) **ETF Modification** means any change or modification of the related ETF DOCUMENTS prevailing on the date of inclusion of the ETF in the INDEX, that could reasonably be expected to affect the value of such ETF or the rights or remedies of any holders thereof, as determined by the Calculation Agent;
- (v) **ETF Service Provider Event** means (A) a change, resignation, termination or replacement of any ETF SERVICE PROVIDER, (B) a change of control or indirect control of any ETF SERVICE PROVIDER, (C) any of the ETF SERVICE PROVIDER is subject to an ETF SERVICE PROVIDER Insolvency Event, where "ETF SERVICE PROVIDER Insolvency Event" has the same meaning as ETF Insolvency Event described in (iv) above, except that ETF is replaced by ETF SERVICE PROVIDER, (D) in the reasonable opinion of the Calculation Agent, any of the ETF SERVICE PROVIDERS is no longer deemed able to carry out its business with the standard of care which was prevailing on the Issue Date or the resignation, termination, replacement, or death of any person deemed to be key in the management of the ETF has occurred or an ETF SERVICE PROVIDER ceases to exist;
- (vi) **Holding Ratio** means the reduction of the ETF's aggregate NET ASSET VALUE under an amount that, in the reasonable opinion of the Calculation Agent, has, or is likely to have, a significant effect on the management conditions of the ETF and/or its operating expenses or would increase the proportion of the ETF UNITS held, or likely to be held, by a HYPOTHETICAL INVESTOR, or any funds managed by the same, to such extent that the full redemption in one single Valid Order of the ETF UNITS held by a HYPOTHETICAL INVESTOR or funds managed by the same, is likely to be impaired;
- (vii) **Merger Event** means the conversion of the ETF UNITS into another class of fund units or securities, or the split of the ETF, its consolidation or its merger with, or its sale or its conveyance of all or substantially all its assets to, a third party;
- (viii) **Nationalisation** means that all the ETF UNITS or all or substantially all the assets of an ETF are nationalised, expropriated or are otherwise required to be transferred to any governmental agency, authority, entity or instrumentality thereof;
- (ix) **Regulatory Action** means, with respect to any ETF, (A) cancellation, suspension or revocation of the registration or approval of such ETF by any governmental, legal or regulatory entity with authority over such ETF UNITS or ETF, (B) any change in the legal, tax,



accounting, or regulatory treatments of the relevant ETF or its ETF SERVICE PROVIDER that is reasonably likely to have an adverse impact on the value of such ETF or on any investor therein (as determined by the Calculation Agent), or (C) such ETF or any of its ETF SERVICE PROVIDER becoming subject to any investigation, proceeding or litigation by any relevant governmental, legal or regulatory authority involving the alleged violation of applicable law for any activities relating to or resulting from the operation of such ETF or ETF SERVICE PROVIDER;

- (x) **Reporting Disruption** means in respect of any ETF, any failure of such ETF to deliver, or cause to be delivered, (A) information that such ETF has agreed to deliver, or cause to be delivered to a HYPOTHETICAL INVESTOR or (B) information that has been previously delivered to a HYPOTHETICAL INVESTOR in accordance with such ETF, or its authorised representative's, normal practice and that the Calculation Agent deems necessary to monitor such ETF's compliance with any investment guidelines, asset allocation methodologies or any other similar policies relating to such ETF;
- (xi) **Strategy Breach** means (A) any breach or violation of any strategy or investment guidelines stated in the related ETF DOCUMENTS, that is reasonably likely to affect the value of the ETF or the rights or remedies of any holders thereof, in each case, as determined by the Calculation Agent or (B) any material modification, as determined by the Calculation Agent, of the risk profile of the ETF from its risk profile prevailing on the date of inclusion of the ETF in the INDEX by reason of, but not limited to, the modification of the proportions, or reduction of diversification, of the type of assets in which the ETF invests or a reduction of the average liquidity of the assets of the ETF;
- (xii) **De-listing Event** means, in respect of an ETF, that such ETF: (A) ceases to be listed, traded or publicly quoted on the RELEVANT EXCHANGE or listing compartment of the RELEVANT EXCHANGE (for any reason other than a Merger Event or a tender offer) and is not immediately re-listed, retraded or re-quoted on an EXCHANGE or quotation system located in the same country as the EXCHANGE (or where the EXCHANGE is within the European Union, in any Member State of the European Union) or (B) has its listing, trading or public quotation maintained in inappropriate conditions in the opinion of the Calculation Agent (such conditions to include, without limitation, a lack of liquidity or the disappearance of the relevant futures and/or option contract of the relevant ETF); However, notwithstanding anything to the contrary in (A) and (B) above, a De-listing Event shall not occur in respect of the ETF if the ETF is immediately re-listed, re-traded and re-quoted on an EXCHANGE or quotation system within the same jurisdiction as the EXCHANGE;



- (xiii) **NAV Currency Event** means that the NET ASSET VALUE of the ETF is no longer denominated in the currency in which it was denominated on the date of inclusion of the ETF in the INDEX;
- (xiv) **NAV Calculation Disruption Event** means, in respect of the ETF and a ETF VALUATION DAY, that (A) the Calculation Agent, acting in its sole discretion, determines that an event (other than an event described in paragraph (xvii) below) has occurred which affect the ETF negatively and make it impossible or impracticable to calculate and/or publish the NET ASSET VALUE of the ETF as of such day and (B) such event has been continuing for more than five (5) ETF SCHEDULED TRADING DAYS;
- (xv) **ETF Settlement Disruption** means in respect of an ETF and an ETF VALUATION DAY, a failure by the ETF to pay in cash the full amount of the redemption proceeds on the date by which the ETF was scheduled to have paid such amount and which, in the determination of the Calculation Agent, makes it impossible or impracticable to determine the NET ASSET VALUE of such ETF as of such date, including without limitation due to (A) the transfer of all illiquid assets of such ETF to a dedicated fund, account or structure pending the liquidation of such assets for the benefit of existing holders of the ETF UNITS, (B) the restriction on the amount or number of redemptions orders that the ETF (or the ETF SERVICE PROVIDER generally in charge of accepting redemption orders) will accept in relation to a single date on which the ETF normally accepts redemption orders, (C) the suspension for any reason of the subscription or redemption orders by the ETF (or the ETF SERVICE PROVIDER generally in charge of accepting subscription and redemption orders), or (D) the postponement of the payment of the balance of redemption proceeds to a date occurring after the financial statements of the ETF have been reviewed by the ETF's statutory auditors, in each case whether these events are imposed by the ETF without being envisaged in the ETF DOCUMENTS on the ETF launch date or are already envisaged by the ETF DOCUMENTS on the ETF launch date and are solely implemented by the ETF after such date;
- (xvi) **Tender Offer** means a takeover offer, tender offer, exchange offer, solicitation, proposal or other event by any entity or person that results in such entity or person purchasing, or otherwise obtaining or having the right to obtain, by conversion or other means, greater than 10 per cent. and less than 100 per cent. of the outstanding voting shares, units or interests of the ETF, as determined by the Calculation Agent, based upon the making of filings with governmental or self-regulatory agencies or such other information as the Calculation Agent deems relevant;
- (xvii) **ETF Reclassification** means (A) the reclassification of the ETF UNITS, (B) the INDEX that the ETF tracks changes or (C) the acquisition of the ETF by, or the aggregation of the ETF into, another fund whose mandate, risk-profile and/or benchmarks that the Calculation Agent



determines to be different from the mandate, risk-profile and/or benchmark as of the Issue Date (or any proposal for the foregoing occurs); or

- (xviii) **ETF Redemption or Subscription Event** means (A) the suspension of transfers of any ETF UNITS, (B) the introduction of a mandatory redemption or partial redemption of the ETF UNITS, (C) the non-execution of any creation, subscription or redemption order in respect of the ETF UNITS, or (D) the introduction or proposed introduction of subscription or redemption fees with respect to the ETF UNITS in excess of those in effect as of the date of inclusion of the ETF in the INDEX.

## 5.5. TERMINATION

SOLACTIVE makes the greatest possible efforts to ensure the resilience and continued integrity of its indices over time. Where necessary, SOLACTIVE follows a clearly defined and transparent procedure to adapt INDEX methodologies to changing underlying markets (see Section 5.2 “Methodology Review”) in order to maintain continued reliability and comparability of the indices. Nevertheless, if no other options are available the orderly cessation of 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 GUIDELINE, 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/>.

## 5.6. 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/>.



## 6. DEFINITIONS

**“ASSET”** is an ETF corresponding to Equity, Bonds and Cash Asset Classes listed in Section 2.

**“ASSET EXCESS RETURN”** shall have the meaning as defined in Section 4.3.

**“ASSET WEIGHT”** shall have the meaning as defined in Section 3.5.

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

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

The **“CLOSING PRICE”** in respect of an INDEX COMPONENT and a TRADING DAY is a security's final regular hours TRADING PRICE published by the EXCHANGE and determined in accordance with the EXCHANGE regulations. If the EXCHANGE has no or has not published a CLOSING PRICE in accordance with the EXCHANGE rules for an INDEX COMPONENT, the last TRADING PRICE will be used.

**“ETF DOCUMENTS”** means, in respect of any ETF, the constitutive and governing documents and other agreements of the ETF specifying the terms and conditions relating to such ETF.

**“ETF SERVICE PROVIDER”** means, in respect of any ETF, any person who is appointed to provide services, directly or indirectly, for that ETF, whether or not specified in the ETF DOCUMENTS, including any fund investment adviser, fund administrator, manager, any person appointed in the role of discretionary investment manager or non-discretionary investment adviser (including a non-discretionary investment adviser to a discretionary manager or another non-discretionary investment adviser) for such ETF (the “ETF ADVISER”), trustee or similar person with the primary administrative responsibilities for such ETF, operator, management company, depository, custodian, sub-custodian, prime broker, registrar and transfer agent or domiciliary agent.

**“ETF SCHEDULED TRADING DAY”** means any day on which the relevant EXCHANGE and relevant RELATED EXCHANGE are scheduled to be open for trading for their respective regular trading sessions.

**“ETF UNIT” OR “UNIT”** means, in respect of any ETF, a share or unit of such ETF.

**“ETF VALUATION DAY”** means, in respect of each ETF observed separately, any date as defined in the ETF DOCUMENTS as of which the official NET ASSET VALUE of such ETF is determined in accordance with its ETF DOCUMENTS.

**“EXCHANGE”** means, in respect of an ETF, each corresponding EXCHANGE or quotation system, or any successor EXCHANGE or quotation system or any substitute EXCHANGE or quotation system to which trading in the ETF, has temporarily relocated (provided that the Calculation Agent has determined that there is comparable liquidity relative to such ETF, on such temporary substitute EXCHANGE or quotation system as on the original EXCHANGE).

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



**“HYPOTHETICAL INVESTOR”** means, with respect to the Hypothetical Hedge Positions, a HYPOTHETICAL INVESTOR deemed to have (a) the benefits and obligations, as provided under the ETF DOCUMENTS, of an investor holding the ETF; (b) in the case of any deemed redemption of such ETF, to have submitted a VALID ORDER requesting redemption of the ETF; and (c) in the case of any deemed investment in such ETF, to have submitted a VALID ORDER requesting subscription of the ETF.

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

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

**“INDEX BUSINESS DAY”** shall mean every weekday, on which New York Stock Exchange (XNYS), the London Stock Exchange (XLON) and the Euronext Amsterdam (XAMS) are open for general business.

**“INDEX COMPONENT”** is each security reflected in the INDEX defined in Section 2.

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

**“INDEX REBALANCE DATE”** shall have the meaning as defined in Section 3.1.

**“INITIAL REBALANCING DATE”** shall have the meaning as defined in “START DATE”.

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

**“NET ASSET VALUE”** in respect of an ETF and an ETF VALUATION DAY, the amount or amounts per unit of such ETF including (for subscription orders) or net (for redemption orders) of all applicable costs, taxes and fees (if any) that would be paid (for subscription orders) or received (for redemption orders) in cash in one or more times by a HYPOTHETICAL INVESTOR pursuant to a VALID ORDER for the subscription or redemption (as applicable) of units of the ETF scheduled to be executed on the official NET ASSET VALUE per unit determined by the ETF (or the ETF SERVICE PROVIDER that generally determines such value) dated as of such ETF VALUATION DAY.

**“OPTIMAL PORTFOLIO”** shall have the meaning as defined in Section 3.3.

**“OVERSIGHT COMMITTEE”** shall have the meaning as defined in Section 5.6.

**“PORTFOLIO VALUE”** shall have the meaning as defined in Section 4.2.

**“PORTFOLIO REALIZED VARIANCE”** shall have the meaning as defined in Section 3.2.

**“PORTFOLIO REALIZED VOLATILITY”** shall have the meaning as square root of “PORTFOLIO REALIZED VARIANCE”.

**“REBALANCE PERIOD”** shall have the meaning as defined in Section 3.1.

**“RELATED EXCHANGE(S)”** means, in respect of an ETF, (a) each EXCHANGE or quotation system where trading has a material effect (as determined by the Calculation Agent) on the overall market for futures and options contracts relating to such ETF and (b) any successor EXCHANGE or quotation system or any substitute EXCHANGE or quotation system to which trading in futures or options contracts relating to an ETF has temporarily relocated (provided that the Calculation Agent has determined that there is comparable liquidity relative to the futures or options contracts relating to such ETF, on such temporary substitute EXCHANGE or quotation system as on the original RELATED EXCHANGE).



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

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

The **“TRADING PRICE”** in respect of an INDEX COMPONENT and a TRADING DAY is the most recent published price at which the INDEX COMPONENT was traded on the respective EXCHANGE.

**“VALID ORDER”** means a valid and timely subscription or redemption order sent to the ETF or the ETF SERVICE PROVIDER that generally accepts such order, in accordance with the subscription or redemption notice period and the relevant cut off time as set forth in the ETF DOCUMENTS.

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