

INDEX METHODOLOGY

AI Powered Multi Asset Index

Version 1.0

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1 INTRODUCTION

This document (the “Index Methodology”) is to be used as a guideline with regard to the composition, calculation and maintenance of the AI Powered Multi Asset Index (the “Index”). Any changes made to the Index Methodology are subject to the approval of a committee, as specified in Section 6.5. The Index is administered, calculated 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 Index Methodology and the documents referenced herein contain the underlying principles and rules regarding the structure and operation of the Index. 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 level of the Index at any certain point in time nor in any other respect. Solactive AG 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 does not constitute a 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.



2 INDEX SPECIFICATIONS

- > The Index is owned by EquBot Inc. ("EquBot") and administered, calculated, and published by Solactive AG
- > It allocates across a diversified universe of 16 assets (each, an "Asset") consisting of 15 exchange-traded funds (each, an "ETF") and a cash index. The Assets are classified in 6 different groups (each, a "Group"): Developed Equities, Developed Bonds, Emerging Markets, Real Assets, Inflation and Cash. The weight of each Asset and each Group are subject to caps
- > The Index allocated between the Assets using modern portfolio theory principles where forecasted returns are computed by EquBot using artificial intelligence techniques
- > The Index is dynamically exposed to portfolio of Assets. This exposure varies between 0% and 150% and may be adjusted on each Trading Day to aim to achieve a volatility of 5% for the Index
- > The Index is excess return, which reflects the weighted performance of the portfolio of Assets in excess of the performance of the USD 3M Libor
- > The Index incorporates a fee of 0.75% per annum, deducted daily
- > In addition, the Index incorporates a transaction cost of 0.02% deducted every time the composition of the portfolio of Assets or the exposure of the Index to the portfolio of Assets are adjusted
- > The Index is denominated in USD.

2.1 SHORT NAME AND ISIN

The Index is published under the following identifiers:

Name	ISIN	RIC	Bloomberg Code
AI Powered Multi Asset Index	DE000SLOASZ3	.AIMAX	AIMAX Index

2.2 INITIAL VALUE

The Index is based on 1000 at the close of trading on 28 June 2005 (the "Index Start Date").



2.3 DISTRIBUTION

The 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 AG 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.

2.4 PRICES AND CALCULATION FREQUENCY

The level of the Index is calculated on each Calculation Day from the Index Start Date based on the closing price of the ETFs.

2.5 PUBLICATION

All specifications and information relevant for calculating the Index are made available on the Solactive website: <http://www.solactive.com>.

2.6 HISTORICAL DATA

Historical data will be maintained from the launch of the Index on 26 January 2021.

2.7 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 EquBot.

3 CALCULATION OF THE INDEX

3.1 INDEX COMPONENTS

The Index dynamically allocates to a diversified portfolio of 16 Assets set forth in the Table of Assets below.



The weight of each Asset is subject to a cap (the "Asset Cap") and the weight of each Group is also subject to a cap (the "Group Cap") (the Asset Caps and Group Caps are collectively the "Caps"), as set forth in the Table of Assets below.

Table of Assets

Group	Asset	Bloomberg Code	Primary Exchange	Asset Cap	Group Cap	Currency
Developed Equities	SPDR® S&P 500® ETF	SPY	NYSE Arca	30%	60%	USD
	iShares® Russell 2000 ETF	IWM	NYSE Arca	20%		USD
	Invesco QQQ Trust SM , Series 1	QQQ	Nasdaq GM	20%		USD
	iShares® MSCI EAFE ETF	EFA	NYSE Arca	20%		USD
	iShares® MSCI Japan ETF	EWJ	NYSE Arca	20%		USD
Developed Bonds	iShares® 1-3 Year Treasury Bond ETF	SHY	NYSE Arca	5%	60%	USD
	iShares® 20+ Year Treasury Bond ETF	TLT	Nasdaq GM	25%		USD
	iShares® iBoxx \$ Investment Grade Corporate Bond ETF	LQD	NYSE Arca	25%		USD
	iShares® iBoxx \$ High Yield Corporate Bond ETF	HYG	NYSE Arca	15%		USD



	Vanguard Total International Bond ETF	BNDX	Nasdaq GM	10%		USD
Emerging Markets	iShares® MSCI Emerging Markets ETF	EEM	NYSE Arca	20%	25%	USD
	iShares® J.P. Morgan USD Emerging Markets Bond ETF	EMB	Nasdaq GM	5%		USD
Real Assets	iShares® U.S. Real Estate ETF	IYR	NYSE Arca	20%	30%	USD
	SPDR® Gold Shares	GLD	NYSE Arca	20%		USD
Inflation	iShares® TIPS Bond ETF	TIP	NYSE Arca	5%	5%	USD
Cash	Cash Asset	Not Applicable	Not Applicable	0%*	Not Applicable	USD

* Subject as provided in section 4.2.

3.2 INDEX LEVEL

The level of the Index (the "Index Level") in respect of the Index Start Date shall be equal to 1000.

The Index Level in respect of each Calculation Day after the Index Start Date ("Calculation Day t") shall be calculated in accordance with the following formula:

$$IL_t = IL_r \times \left[1 + \text{Exp}_r \times \left(\frac{ERPL_t}{ERPL_r} - 1 \right) - \text{Fee} \times \frac{\text{Act}_{r,t}}{360} - \text{TC}_t \right]$$

Where:

IL_t Means the Index Level in respect of Calculation Day t;



IL_r	Means the Index Level in respect of the Trading Day immediately preceding Calculation Day t;
Exp_r	Means the Exposure (as defined in section 3.3) in respect of the Trading Day immediately preceding Calculation Day t ("Trading Day r");
ERPL_t	Means the ER Portfolio Level (as defined in section 3.5) in respect of Calculation Day t;
ERPL_r	Means the ER Portfolio Level in respect of Trading Day r;
Fee	Means 0.75% (per annum);
Act_{r,t}	Means the number of calendar days from, but excluding, Trading Day r to, and including, Calculation Day t;
TC_t	Means the transaction cost in respect of Calculation Day t, calculated in accordance with the following formula:

$$TC_t = \text{abs}(\text{Exp}_r - \text{Exp}_t) \times 0.02\%$$

Where:

Exp_t	Means the Exposure in respect of Calculation Day t or, if Calculation Day t is not a Trading Day, the Exposure in respect of the Trading Day immediately preceding Calculation Day t;
abs	Means, followed by an amount in brackets, the absolute value of such amount.

3.3 EXPOSURE

The exposure (the "Exposure") in respect of the Index Start Date shall be equal to 101.371089143789% .

The Exposure in respect of each Trading Day after the Index Start Date ("Trading Day r") shall be calculated in accordance with the following formula:

$$\text{Exp}_r = \min \left(\min(\text{Max Exp}, \text{Exp}_{r-1} + \Delta), \max \left(\text{Exp}_{r-1} - \Delta, \frac{\text{Target Volatility}}{RV_{r-1}} \right) \right)$$



Where:

Exp_r	Means the Exposure in respect of Trading Day r;
Max Exp	Means 150%;
Exp_{r-1}	Means the Exposure in respect of the Trading Day immediately preceding Trading Day r ("Trading Day r-1");
Δ	Means 25%;
Target Volatility	Means 5%;
RV_{r-1}	Means the Realized Volatility (as defined in section 3.4) in respect of Trading Day r-1.

3.4 REALIZED VOLATILITY

The realized volatility (the "Realized Volatility") in respect of the 24 June 2005 shall be equal to 0.0499841240076723.

The Realized Volatility in respect of each Trading Day after 24 June 2005 ("Trading Day r") shall be calculated in accordance with the following formula:

$$RV_r = \max (RV_{s,r}, RV_{l,r})$$

Where:

RV_r	Means the Realized Volatility in respect of Trading Day r;
RV_{s,r}	Means the short term realized volatility in respect of Trading Day r, calculated in accordance with the following formula:

$$RV_{s,r} = \sqrt{252 \times \text{Var}_{s,r}}$$

Where:

Var_{s,r}	Means the short term realized variance in respect of Trading Day r, calculated in accordance with the following formula:
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$$\text{Var}_{s,t} = \lambda_s \times \text{Var}_{s,r-1} + (1 - \lambda_s) \times \left[\ln \left(\frac{\text{ERPL}_r}{\text{ERPL}_{r-1}} \right) \right]^2$$

$\text{Var}_{s,r-1}$ Means the short term realized variance in respect of the Trading Day immediately preceding Trading Day r ("Trading Day r-1"), provided that the short term realized variance in respect of 24th June 2005 shall be equal to 8.06058589881897E-06;

λ_s Means 0.94;

$\text{RV}_{l,r}$ Means the long term realized volatility in respect of Trading Day r, calculated in accordance with the following formula:

$$\text{RV}_{l,r} = \sqrt{252 \times \text{Var}_{l,r}}$$

Where:

$\text{Var}_{l,r}$ Means the long term realized variance in respect of Trading Day r, calculated in accordance with the following formula:

$$\text{Var}_{l,r} = \lambda_l \times \text{Var}_{l,r-1} + (1 - \lambda_l) \times \left[\ln \left(\frac{\text{ERPL}_r}{\text{ERPL}_{r-1}} \right) \right]^2$$

$\text{Var}_{l,r-1}$ Means the long term realized variance in respect of Trading Day r-1, provided that the long term realized variance in respect of 24 June 2005 shall be equal to 0.0000099143359238665

λ_l Means 0.97;

ERPL_r Means the ER Portfolio Level in respect of Trading Day r;

ERPL_{r-1} Means the ER Portfolio Level in respect of Trading Day r-1.



3.5 ER PORTFOLIO LEVEL

The excess return level of the portfolio of Assets (the "ER Portfolio Level") in respect of the 01 February 2005 (the "ER Portfolio Start Date") shall be equal to 100.

The ER Portfolio Level in respect of each Calculation Day after ER Portfolio Start Date ("Calculation Day t") shall be calculated in accordance with the following formula:

$$ERPL_t = ERPL_{t-1} \times \left[1 + \left(\frac{PL_t}{PL_{t-1}} - 1 \right) - \left(\frac{C_t}{C_{t-1}} - 1 \right) \right]$$

Where:

- ERPL_t** Means the ER Portfolio Level in respect of Calculation Day t;
- ERPL_{t-1}** Means the ER Portfolio Level in respect of the Calculation Day immediately preceding Calculation Day t ("Calculation Day t-1");
- PL_t** Means the Portfolio Level (as defined in section 3.6) in respect of Calculation Day t;
- PL_{t-1}** Means the Portfolio Level in respect of Calculation Day t-1;
- C_t** Means the Total Return Level (as defined in section 3.7) of the Cash Asset in respect of Calculation Day t;
- C_{t-1}** Means the Total Return Level of the Cash Asset in respect of Calculation Day t-1.

3.6 PORTFOLIO LEVEL

The level of the portfolio of Assets (the "Portfolio Level") in respect of the ER Portfolio Start Date shall be equal to 100.

The Portfolio Level in respect of each Calculation Day after the ER Portfolio Start Date ("Calculation Day t") shall be calculated in accordance with the following formulas:

$$PL_t = PL_{t-1} + \left(\sum_{i=1}^n U_{i,t-1} \times (TR_{i,t} - TR_{i,t-1}) \right) - TC \times \left(\sum_{i=1}^n \text{abs}(U_{i,t-1} - U_{i,t-2}) \times TR_{i,t-1} \right)$$



Where:

- PL_t** Means the Portfolio Level in respect of Calculation Day t;
- PL_{t-1}** Means the Portfolio Level in respect of the Calculation Day immediately preceding Calculation Day t ("Calculation Day t-1");
- U_{i,t-1}** Means the number of units of Asset i in respect of Calculation Day t-1, calculated in accordance with the following formula:

$$U_{i,t-1} = \frac{W_{i,r} \times PL_{i,r}}{TR_{i,r}}$$

Where:

- W_{i,r}** Means the Percentage Weight (as defined in section 3.6.1) of Asset i in respect of the Rebalancing Day immediately preceding Calculation Day t ("Rebalancing Day r");
- PL_{i,r}** Means the Portfolio Level in respect of Rebalancing Day r;
- TR_{i,t}** Means the Total Return Level (as defined in section 3.7) of Asset i in respect of Calculation Day t;
- TR_{i,t-1}** Means the Total Return Level of Asset i in respect of Calculation Day t-1;
- TC** Means 0.02%;
- U_{i,t-2}** Means the number of units of Asset i in respect of the Calculation Day immediately preceding Calculation Day t ("Calculation Day t-2"), calculated in accordance with the following formula:

$$U_{i,t-2} = \frac{W_{i,r'} \times PL_{i,r'}}{TR_{i,r'}}$$

Where:

- W_{i,r'}** Means the Percentage Weight of Asset i in respect of the Rebalancing Day immediately preceding Calculation Day t-1 ("Rebalancing Day r'");
- PL_{i,r'}** Means the Portfolio Level in respect of Rebalancing Day r';



$TR_{i,r}$ Means the Total Return Level of Asset i in respect of Rebalancing Day r';

Provided that, if Calculation Day t is the Calculation Day immediately following the ER Portfolio Start Date, $U_{i,t-2}$ shall be equal to $U_{i,t-1}$;

n Means the number of Assets.

3.6.1 Percentage Weight

The Percentage Weight of an Asset ("Asset i") in respect of each Rebalancing Day ("Rebalancing Day r") shall be determined as follows:

- a) If Rebalancing Day r falls on the ER Portfolio Start Date, the Percentage Weight of Asset i in respect of such Rebalancing Day shall be equal to the Asset Weight (as defined in section 4.6) of such Asset in respect of the Selection Date falling on the ER Portfolio Start Date;
- b) If Rebalancing Day r falls on the last Trading Day of a Rebalancing Period, the Percentage Weight of Asset i in respect of such Rebalancing Day shall be equal to the Asset Weight of such Asset in respect of the Selection Date immediately preceding such Rebalancing Day;
- c) Otherwise, the Percentage Weight of Asset i in respect of such Rebalancing Day shall be calculated in accordance with the following formula:

$$W_{i,r} = \left(1 - \frac{k}{3}\right) \times EW_{i,r} + \frac{k}{3} \times AW_{i,s}$$

Where:

$W_{i,r}$ Means the Percentage Weight of Asset i in respect of Rebalancing Day r;

k Means, if Rebalancing Day r falls (i) on the first Trading Day of a Rebalancing Period, 1; otherwise (ii) 2;

$EW_{i,r}$ Means the effective weight of Asset i in respect of Rebalancing Day r, calculated in accordance with the following formula:



$$EW_{i,r} = \frac{AW_{i,s'} \times \frac{TR_{i,r}}{TR_{i,r'}}}{\sum_{i=1}^n AW_{i,s'} \times \frac{TR_{i,r}}{TR_{i,r'}}$$

Where:

$AW_{i,s'}$ Means the Asset Weight of Asset i in respect of the Selection Date immediately preceding the Selection Date immediately preceding Rebalancing Day r;

$TR_{i,r}$ Means the Total Return Level of Asset i in respect of Rebalancing Day r;

$TR_{i,r'}$ Means the Total Return Level of Asset i in respect of the last Trading Day of the Rebalancing Period immediately preceding the Rebalancing Period that Rebalancing Day r belongs to (or, if none, in respect of the ER Portfolio Start Date);

n Means the number of Assets;

$AW_{i,s}$ Means the Asset Weight of Asset i in respect of the Selection Date immediately preceding Rebalancing Day r.

3.7 TOTAL RETURN LEVEL OF AN ASSET

The total return level (the "Total Return Level") of each Asset in respect of 01 June 2004 (the "Asset Total Return Level Start Date") shall be equal to 100.

The Total Return Level of each Asset ("Asset i") in respect of each Calculation Day after the Asset Total Return Level Start Date ("Calculation Day t") shall be calculated in accordance with the following formula:

a) If Asset i is the Cash Asset:

$$TR_{\text{Cash},t} = TR_{\text{Cash},t-1} \times \left(1 + r_{t-1} \times \frac{\text{Act}_{t-1,t}}{360} \right)$$

Where:



- $TR_{Cash,t}$ Means the Total Return Level of the Cash Asset in respect of Calculation Day t;
- $TR_{Cash,t-1}$ Means the Total Return Level of the Cash Asset in respect of the Calculation Day immediately preceding Calculation Day t ("Calculation Day t-1");
- r_{t-1} Means the USD 3 Month LIBOR Rate in respect of the Calculation Day immediately preceding Calculation Day t;
- $Act_{t-1,t}$ Means the number of calendar days from, but excluding, Calculation Day t-1 to, and including, Calculation Day t;

- b) Otherwise, subject as provided in section 5:

$$TR_{i,t} = TR_{i,t-1} \times \frac{P_{i,t} + Div_{i,t}}{P_{i,t-1}}$$

Where:

- $TR_{i,t}$ Means the Total Return Level of Asset i in respect of Calculation Day t;
- $TR_{i,t-1}$ Means the Total Return Level of Asset i in respect of Calculation Day t-1 (as determined in accordance with section 5, if applicable);
- $P_{i,t}$ Means the Price of Asset i in respect of Calculation Day t;
- $P_{i,t-1}$ Means the Price of Asset i in respect of Calculation Day t-1;
- $Div_{i,t}$ Means the aggregate amount of dividends for Asset i with an ex-dividend date falling in the period from, but excluding, Calculation Day t-1 to, and including, Calculation Day t.

3.8 PUBLICATION AND ACCURACY

The Index Level is published around 16:50 New-York time on Bloomberg and Reuters with levels rounded to two decimal places.



3.9 CORPORATE ACTIONS

Corporate actions on the Assets that are exchange-traded funds (other than dividends) will be treated in accordance with the methodology described in the Solactive [Equity Index Methodology](#), which is incorporated by reference herein and available on the Solactive website: www.solactive.com.

3.10 RECALCULATION

Solactive makes the greatest possible efforts to accurately calculate and maintain its indices. However, errors in the index determination process may occur from time to time for a variety of reasons (internal or external) and therefore, cannot be completely ruled out. Solactive endeavors to correct all errors that have been identified within a reasonable timeframe. Such timeframe, as well as the general measures to be taken generally depend on the underlying and are specified in the Solactive [Correction Policy](#), which is incorporated by reference herein and available on the Solactive website: www.solactive.com.

3.11 MARKET DISRUPTION

Following certain market disruption events, Solactive calculates its indices following predefined and exhaustive arrangements, as described in the Solactive [Disruption Policy](#), which is incorporated by reference herein and available on the Solactive website: www.solactive.com. Such market disruption events can arise due to a variety of reasons, and generally result in inaccurate or delayed prices for one or more components of the Index. The determination of the Index may be limited or impaired at times of illiquid or fragmented markets and market stress.

3.12 EXTRAORDINARY EVENTS

Extraordinary and unforeseeable events not addressed by this section will be treated as described in section 4.9 of the Solactive [Disruption Policy](#).

- a) Extraordinary Events Definition. "Extraordinary Event" in respect of an ETF Asset means an event deemed as extraordinary by Solactive, which may include, by way of example and without limitation:
 - i) an ETF Asset is de-listed from the relevant exchange for such ETF Asset, liquidated, or otherwise terminated; or



- ii) the Price of any ETF Asset is not published by the Primary Exchange where it is listed for 8 consecutive Calculation Days.
- b) Consequences of Extraordinary Events. For any ETF Asset, (i) if its Price is not published by its Primary Exchange, but is published by a successor Primary Exchange acceptable to Solactive or (ii) if it is replaced by a successor ETF whose underlying commodities are the same as those of the replaced ETF Asset or whose ETF Underlying Index is either the same as that of the replaced ETF Asset or is an index using, in Solactive's determination, the same or a substantially similar formula for and method of calculation as used in the calculation of the replaced ETF Asset's ETF Underlying Index and, in any case, whose sponsor is acceptable to Solactive, then in the case of (i) or (ii) above that ETF Asset will thereafter be deemed to be the successor ETF so calculated and announced by that successor sponsor described in (i) above or that successor ETF described in (ii) above, as the case may be, with effect from a date determined by Solactive, who may make such adjustments to these Index rules as it determines are appropriate to account for such change. Upon the acceptance of a successor ETF by Solactive, such successor shall take the place of the relevant ETF Asset. For the avoidance of doubt, the prior daily prices of such successor shall be used in future calculations of the Reference Portfolio Level in future.
- c) The consequences of Extraordinary Events in paragraph b) above will supersede anything to the contrary in the Solactive Equity Index Methodology or the Solactive Disruption Policy.

3.13 LIBOR UNAVAILABILITY AND CESSATION

(a) In the event that the USD 3 Month LIBOR Rate does not appear on the Price Source at approximately 11:00 a.m., London time, on the Interest Determination Date, then Solactive will use for the calculation of the Index the most recent available USD 3 Month LIBOR Rate published on the Price Source.

(b) If Solactive determines that USD 3 Month LIBOR (1) is no longer representative as a measure of the average rate at which banks are willing to borrow wholesale unsecured funds in the London interbank market or (2) has been discontinued at any time, it will substitute for USD 3 Month LIBOR an industry-accepted substitute or successor rate (the "LIBOR Successor Rate"), including any adjustment to or related spread on such LIBOR Successor Rate, in each case in its sole discretion and in accordance with Section 6.1. In the event that Solactive determines, in its sole discretion, that there is no industry-accepted substitute or successor rate and that there are no quotations provided as described in paragraph (a) above, then, after consulting such sources as it deems reasonable, it will estimate the USD 3 Month LIBOR rate in its sole discretion from time to time to use as the LIBOR Successor Rate. Further, if Solactive subsequently determines, in its sole discretion, that an industry-accepted substitute or successor rate has emerged or otherwise become available, it will cease to estimate the



LIBOR Successor Rate and instead substitute such industry-accepted substitute or successor rate as provided in the first sentence of this paragraph (b).

If Solactive has determined a LIBOR Successor Rate (including any such adjustment and/or spread) in accordance with the foregoing, Solactive in its sole discretion may also implement changes to the Index rules as it determines are appropriate to account for such change to the LIBOR Successor Rate, including, but not limited to, the definition of any business day (including a London Business Day), interest determination dates and any method for obtaining the LIBOR Successor Rate if such rate is unavailable on the relevant date of determination, and any changes to any such adjustment and/or spread, in a manner that is consistent with industry-accepted practices for the LIBOR Successor Rate. Once Solactive chooses a LIBOR Successor Rate, such LIBOR Successor Rate will be used in place of USD 3 Month LIBOR for all calculations, and the term "USD 3 Month LIBOR," as used in this methodology, shall be then deemed to refer to the LIBOR Successor Rate.

4 REBALANCING OF THE INDEX

4.1 INDEX REBALANCING

In respect of each Selection Date, a mean-variance optimization process as described below (the "Portfolio Optimization Process") is performed and the Index Administrator will revise the composition of the Index. The determination of the composition of the Index is fully rule-based: the Index Administrator has no discretion. The rebalancing of the Index is then performed during the Rebalancing Period.

4.2 PORTFOLIO OPTIMIZATION PROCESS

In respect of each Selection Date, an optimal portfolio of Assets (the "Optimal Portfolio") shall be determined.

The Optimal Portfolio of Assets in respect of a Selection Date shall be the Eligible Portfolio with the highest Forecasted Return (as defined in section 4.4) and a Variance (as defined in section 4.5) no greater than 0.05^2 (the "Target Variance") (such constraint on the Variance of the portfolio, the "Variance Constraint").

Provided that, in respect of a Selection Date, if no Eligible Portfolio meets the Variance Constraint:



- the Target Variance in respect of such Selection Date will be increased in increments of 0.0025^2 until an Eligible Portfolio meets the revised Variance Constraint, subject to a maximum value for the Target Variance of 0.075^2 ; and
- if, in respect of such Selection Date, no Eligible Portfolio has a Variance no greater than 0.075^2 , then the Asset Cap for the Cash Asset in respect of such Selection Date will be increased in increments of 10% until an Eligible Portfolio with a Variance no greater than 0.075^2 is found.

4.3 AI FORECASTED RETURNS

4.3.1 EquiBot

EquiBot Inc is a San Francisco, CA based investment manager, a graduate of the IBM Global Entrepreneur Program, and is part of the With Watson Program. EquiBot's mission is to give investors access to investment opportunities that Artificial Intelligence ("AI") can uncover.

Using both proprietary technology and IBM Watson®, EquiBot designs investment strategies that utilize AI throughout the entire investment process. EquiBot technology can combine both fundamental and quantitative analysis while formulating new investment insights through the use of AI. EquiBot solutions utilize large amounts of data to build predictive financial models on over 15,000 globally traded companies.

Along with being the owner of the Index, EquiBot also manages several exchange-traded funds and manages dedicated mandates for institutional investors.

4.3.2 AI Forecasted Returns

In respect of each Selection Date, EquiBot computes the AI forecasted return ("Forecasted Return") of each ETF. The Forecasted Return of an ETF is its expected change in price over a 1-month horizon, relative to its current price.

Forecasted Returns for each ETF are calculated by way of a rules-based process that uses both proprietary technology and IBM Watson® and are the outputs of Long Short-Term Memory (LSTM) Deep Learning Models that have been trained on source data that begins in 1999.

This computation also leverages models built on the underlying components of each ETF to forecast their contribution to the ETF's return.



A summary of the source data, presented in the form of aggregated signals, is provided in the Annex herein and includes:

- AI Financial Signals are based on data collected since 1999, where available. The data are sourced from trading data, financial statements, industry data, and forecasted financial data;
- AI Macro Signals are based on data collected since 1999, where available. The data are sourced from market reports, syndicate economic research groups, and central bank direct and related texts;
- AI News Signals are based on data collected since 1999, where available. The data are sourced from news articles, social media posts, and curated global economic events.

Natural Language Processing (“NLP”), powered by IBM Watson®, is used to extract the relevant signals from these sources, where needed.

In addition to the source data provide in Annex, the models also use historical volatility and correlation patterns to calculate the Forecasted Return for each ETF in an attempt to prevent statistically non-normal forecasts.

4.3.3 Cash Forecasted Return

For the Cash Asset, the Forecasted Return in respect of each Selection Date (“Selection Date s”) shall be calculated in accordance with the following formula:

$$FR_{s,cash} = \frac{CT_s}{CT_{s-22}} - 1$$

Where:

- $FR_{s,cash}$ Means the Forecasted Return of the Cash Asset in respect of Selection Date s;
- CT_s Means the Total Return Level of the Cash Asset in respect of Selection Date s;
- CT_{s-22} Means the Total Return Level of the Cash Asset in respect of the Calculation Day falling 22 Calculation Days before Selection Date s.



4.3.4 Discontinuation of the Selection Process

In the event that EquBot would no longer be able to compute or communicate the Forecasted Returns of one or more ETF to the Index Administrator, the Forecasted Return of each Asset ("Asset i") in respect of future Selection Dates (each, "Selection Date s"), shall be calculated in accordance with the following formula:

$$FR_{s,i} = \frac{TR_{i,s}}{TR_{i,s-126}} - 1$$

Where:

- $FR_{s,p}$ Means the Forecasted Return of Asset i in respect of Selection Date s;
- $TR_{i,s}$ Means the Total Return Level of Asset i in respect of Selection Date s;
- $TR_{i,s-126}$ Means the Total Return Level of Asset i in respect of the Calculation Day falling 126 Calculation Days before Selection Date s.

4.4 FORECASTED RETURN OF AN ELIGIBLE PORTFOLIO

The forecasted return ("Forecasted Return") of an Eligible Portfolio in respect of each Selection Date ("Selection Date s") shall be calculated in accordance with the following formula:

$$FR_s = \sum_{i=1}^n W_i' \times FR_{i,s}$$

Where:

- FR_s Means the Forecasted Return of such Eligible Portfolio in respect of Selection Date s
- W_i' Means the weight attributed to Asset i in such Eligible Portfolio;
- $FR_{i,s}$ Means the Forecasted Return of Asset i in respect of Selection Date s (as defined in section 4.3);
- n Means the number of Assets.



4.5 VARIANCE OF AN ELIGIBLE PORTFOLIO

The variance ("Variance") of an Eligible Portfolio in respect of a Selection Date ("Selection Date s") shall be calculated in accordance with the following formula:

$$\text{Var}_s = \sum_{i,j=1}^n W_i' \times W_j' \times \text{Cov}_{i,j}$$

Where:

- Var_s** Means the Variance of such Eligible Portfolio in respect of Selection Date s;
- W_i'** Means the weight attributed to Asset i in such Eligible Portfolio;
- W_j'** Means the weight attributed to Asset j in such Eligible Portfolio;
- n** Means the number of Assets;
- cov_{i,j}** Means the covariance between Asset i and Asset j, calculated in accordance with the following formula:

$$\text{cov}_{i,j} = \frac{252}{5 \times (N - 1)} \sum_{k=0}^{N-1} \left(\left(\frac{\text{TR}_{i,s-k}}{\text{TR}_{i,s-k-5}} - 1 \right) - \bar{R}_i \right) \times \left(\left(\frac{\text{TR}_{j,s-k}}{\text{TR}_{j,s-k-5}} - 1 \right) - \bar{R}_j \right)$$

Where:

- N** Means 126;
- TR_{i,s-k}** Means the Total Return Level of Asset i in respect of the Calculation Day falling k Calculation Days before Selection Date s;
- TR_{i,s-k-5}** Means the Total Return Level of Asset i in respect of the Calculation Day falling k+5 Calculation Days before Selection Date s;
- TR_{j,s-k}** Means the Total Return Level of Asset j in respect of the Calculation Day falling k Calculation Days before Selection Date s;
- TR_{j,s-k-5}** Means the Total Return Level of Asset j in respect of the Calculation Day falling k+5 Calculation Days before Selection Date s;



\bar{R}_i Means an amount calculated in accordance with the following formula:

$$\bar{R}_i = \frac{1}{N} \times \sum_{k=0}^{N-1} \left(\frac{TR_{i,s-k}}{TR_{i,s-k-5}} - 1 \right);$$

\bar{R}_j Means an amount calculated in accordance with the following formula:

$$\bar{R}_j = \frac{1}{N} \times \sum_{k=0}^{N-1} \left(\frac{TR_{j,s-k}}{TR_{j,s-k-5}} - 1 \right).$$

4.6 ASSET WEIGHTS

The asset weight ("Asset Weight") of each Asset in respect of each Selection Date from, and including, the ER Portfolio Start Date, shall be calculated as the arithmetic average of the weight of such Asset within the Optimal Portfolio (as defined in section 4.2) in respect of such Selection Date and each of the 3 preceding Selection Dates.

5 BACKTESTING AND DATA

In order to extend the backtest of the Index, the time series for the Assets set forth in the Table of Extended Assets below have been extended prior to their existence using the level of their respective underlying index, or, if unavailable, the level of a proxy index. An adjustment has been applied to account for the expense ratio of each exchange-traded fund, which is not reflected in the level of the underlying index or proxy index, as applicable.

The Total Return Level of each such Asset in respect of the Asset Total Return Level Start Date shall be equal to 100.

The Total Return Level of each such Asset ("Asset i") in respect of each Calculation Day ("Calculation Day t") from, but excluding, the Asset Total Return Level Start Date to, and including, the ETF Start Date in respect of such Asset, as set forth in the Table of Extended Assets below, shall be calculated in accordance with the following formula:

$$TR_{i,t} = TR_{i,t-1} \times \left(\frac{P_{i,t}}{P_{i,t-1}} - TER_i \times \frac{Act_{t-1,t}}{365} \right)$$

Where:



$TR_{i,t}$	Means the Total Return Level of Asset i in respect of Calculation Day t;
$TR_{i,t-1}$	Means the Total Return Level of Asset i in respect of the Calculation Day immediately preceding Calculation Day t;
$P_{i,t}$	Means the ETF Proxy Index Level of Asset i in respect of Calculation Day t;
$P_{i,t-1}$	Means the ETF Proxy Index Level of Asset i in respect of the Calculation Day immediately preceding Calculation Day t;
TER_i	Means the Total Expense Ratio of Asset i, as set forth in the Table of Extended Assets below;
$Act_{t-1,t}$	Means the number of calendar days from, but excluding, the Calculation Day immediately preceding Calculation Day t to, and including, Calculation Day t;

Table of Extended Assets

Asset	ETF Start Date	ETF Underlying Index	ETF Underlying Index Bloomberg Code	Total Expense Ratio
Vanguard Total International Bond ETF	06 April 2013	Bloomberg Barclays Global Aggregate ex USD Index *	LG38TRUH Index*	0.08%
iShares® iBoxx \$ High Yield Corporate Bond ETF	11 April 2007	iBoxx USD Liquid High Yield Index	IBOXHY Index	0.49%
iShares® J.P. Morgan USD Emerging Markets Bond ETF	19 December 2007	J.P. Morgan EMBI Global Core	JPEICORE Index	0.40%
SPDR® Gold Shares	18 November 2004	LBMA Gold Price	GOLDLNPM Index	0.40%

**This index is a proxy index as the underlying index of this ETF doesn't have sufficient history*

6 MISCELLANEOUS

6.1 DISCRETION

Any discretion which may need to be exercised in relation to the determination of the Index shall be limited to (i) exercising routine judgment (in the expert view of the Index Administrator) in the administration of the Index rules, provided, however, that such routine judgment does not include deviations or alterations to the Index rules that are designed to improve the financial performance of



the Index, (ii) correcting errors in the implementation of the rules or calculations made pursuant to the rules, or (iii) making an adjustment to respond to an unanticipated event outside of Solactive's control, such as a stock split, merger, listing or delisting, nationalization, or insolvency, a disruption in the financial markets for specific assets or in a particular jurisdiction, regulatory compliance requirement, force majeure, or any other unanticipated event of similar magnitude and significance, subject to sections 3.9 through 3.13 hereof.

6.2 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.

6.3 CHANGES IN CALCULATION METHOD

The application by the Index Calculation Agent of the method described in this document is final and binding. The Index Calculation Agent 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. In such cases, the Index Administrator may 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.



6.4 TERMINATION

Solactive makes the greatest possible efforts to ensure the resilience and continued integrity of its indices over time. Nevertheless, if no other options are available, the orderly cessation of an index may be necessary. 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 Termination Policy, which is incorporated by reference and available on the Solactive website: www.solactive.com.

6.5 OVERSIGHT

The Index Administrator is responsible for decisions regarding any amendments to the Index rules. Any such amendment, which may result in an amendment of the Index Methodology, must be submitted to an oversight committee for prior approval, in accordance with Solactive's "Methodology Policy", which is available at www.solactive.com.



7 DEFINITIONS

“Asset” has the meaning given to it in section 2.

“Asset Cap” has the meaning given to it in section 3.1.3.1

“Asset Total Return Level Start Date” has the meaning given to it in section 3.7.

“Asset Weight” has the meaning given to it in section 4.6.

“Benchmark Regulation” or “BMR” has the meaning given to it in the Introduction

“Calculation Day” means each day on which the Primary Exchanges in respect of the New York Stock Exchange (NYSE) is scheduled to bet open for its regular trading session

“Caps” has the meaning given to it in section 3.1.

“Eligible Portfolio” means any hypothetical portfolio composed of the Assets that satisfies the following constraints: (i) the weights attributed to the Assets do not breach the Asset Caps and Group Caps (as detailed in the Table of Assets in section 3.1); (ii) the weight attributed to each Asset must not be negative and (iii) the aggregate of the weights attributed to the Assets must be equal to 1.

“EquBot” has the meaning given to it in section 2.

“ER Portfolio Level” has the meaning given to it in section 3.53.5.

“ER Portfolio Start Date” has the meaning given to it in section 3.5.

“ETF” has the meaning given to it in section 2.

“ETF Proxy Index” means, in respect of an ETF Asset, the index underlying such ETF Asset.

“ETF Proxy Index Level” means, in respect of a Calculation Day, the official closing level of the ETF Proxy Index in respect of such Asset (as set forth in the Table of Extended Assets in section 5) on such Calculation Day, as published by the Price Source.

“Exposure” has the meaning given to it in section 3.3.

“Federal Funds Rate” means, in respect of a Calculation Day, the US Federal Funds Effective Rate on such Calculation Day, as published by the Price Source

“Group” has the meaning given to it in section 2.

“Group Cap” has the meaning given to it in section 3.1.

“Index” has the meaning given to it in the Introduction.

“Index Administrator” means Solactive AG.



"Index Calculation Agent" means Solactive AG.

"Index Level" has the meaning given to it in section 3.2.

"Index Methodology" has the meaning given to it in the Introduction.

"Index Start Date" has the meaning given to it in section 2.2.

"Interest Determination Date" means the second London Business Day prior to the relevant Calculation Date.

"Libor Successor Rate" has the meaning given to it in section 3.13.

"London Business Day" means any day on which commercial banks are open for business, including dealing in U.S. dollars, in London.

"Optimal Portfolio" has the meaning given to it in section 4.2.

"Portfolio Level" has the meaning given to it in section 3.6.

"Portfolio Optimization Process" has the meaning given to it in section 4.1.

"Forecasted Return" has the meaning given to it in section 4.3.2 (in respect of an ETF), 4.3.3 (in respect of the Cash Asset), and 4.4 (in respect of an Eligible Portfolio).

"Price" means, in respect of a Calculation Day and each ETF, the official closing price of such Asset on such Calculation Day on the Primary Exchange in respect of such ETF, as published by the Price Source

"Price Source" means the Thomson Reuters Corporation (including any successor)

"Primary Exchange" means, in respect of an ETF, the exchange on which such ETF is primarily listed. The Primary Exchange of each ETF as of the launch date of the Index is set forth in the column "Primary Exchange" in the Table of Assets in section 3.1.

"Realized Volatility" has the meaning given to it in section 3.4.

"Rebalancing Day" means the ER Portfolio Start Date and each Trading Day during any Rebalancing Period.

"Rebalancing Period" means the period of three consecutive Trading Days commencing on the second Trading Day following each Selection Date after the ER Portfolio Start Date.

"Selection Date" means (i) the ER Portfolio Index Start Date, (ii) the three Fridays preceding the ER Portfolio Start Date and (iii) Every Friday after the ER Index Start Date, or, in each case, if such day is not a Calculation Day, the immediately preceding Calculation Day.

"Solactive" has the meaning given to it in the Introduction.

"Target Variance" has the meaning given to it in section 4.2.



"Total Return Level" has the meaning given to it in section 3.7.

"Trading Day" means each day on which the Primary Exchanges in respect of all the Assets are scheduled to be open for trading for their regular trading session

"USD 3 Month LIBOR Rate" means, in respect of a Calculation Day, the ICE LIBOR USD 3 Month rate at approximately 11:00 a.m., London time, on the Interest Determination Date for 3-month U.S. dollar deposits commencing on that Calculation Day, as published by the Price Source, except as provided in Section 3.12.

"Variance" has the meaning given to it in section 4.5.

"Variance Constraint" has the meaning given to it in section 4.2.

-30

A blue line graph showing a fluctuating trend. The line starts at a low point, rises to a peak, dips slightly, rises again to a higher peak, dips to a sharp low point labeled '-30', and then rises to a final peak. The graph is partially cut off at the bottom and right edges.



8 APPENDIX

8.1 CONTACT DATA

For Index Administration, Calculation, and Dissemination:

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8.2 CHANGES 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 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 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.



9 ANNEX

Table 1. AI Financial signals and data sources

ID	Signal	Primary Data Source
1	Sales/Revenue	Financial Statement
2	COGS	Financial Statement
3	R&D Expense	Financial Statement
4	SG&A Expense	Financial Statement
5	Depreciation & Amortization	Financial Statement
6	Interest Expense	Financial Statement
7	Non-Operating Income/Loss	Financial Statement
8	Income Taxes	Financial Statement
9	Minority Interest in Earnings	Financial Statement
10	Other Income (Loss)	Financial Statement
11	Ext. Items & Disc. Ops.	Financial Statement
12	Preferred Dividends	Financial Statement
13	Operating Cash and Market. Sec.	Financial Statement
14	Receivables	Financial Statement
15	Inventories	Financial Statement
16	Other Current Assets	Financial Statement
17	PP&E (Net)	Financial Statement
18	Investments	Financial Statement
19	Intangibles	Financial Statement
20	Other Assets	Financial Statement
21	Current Debt	Financial Statement
22	Accounts Payable	Financial Statement



23	Income Taxes Payable	Financial Statement
24	Other Current Liabilities	Financial Statement
25	Long-Term Debt	Financial Statement
26	Other Liabilities	Financial Statement
27	Deferred Taxes	Financial Statement
28	Minority Interest	Financial Statement
29	Preferred Stock	Financial Statement
30	Paid in Common Capital (Net)	Financial Statement
31	Retained Earnings	Financial Statement
32	Common Dividends	Financial Statement
33	EBITDA	Financial Statement
34	EPS	Financial Statement
35	Analyst Forecast on Earning (EPS)	Third Party Data Provider of forecasted financial data
36	Analyst Growth forecast	Third Party Data Provider of forecasted financial data
37	Last Trading Prices	Third Party Trading Data Provider
38	Trading Volume	Third Party Trading Data Provider
39	Relative Strength Index	Third Party Trading Data Provider
40	52 Week High	Third Party Trading Data Provider
41	52 Week Low	Third Party Trading Data Provider
42	Open Price	Third Party Trading Data Provider
43	Interest Rate Curves	Third Party Data Provider
44	Corporate Option Adjusted Spreads	Third Party Data Provider
45	OAS by Credit Rating	Third Party Data Provider



46	Sovereign Credit Ratings & Rates	Public Websites
47	Forecasted Interest Rate Curves	Third Party Data Provider
48	Default Rates	Third Party Data Provider
49	Credit Default Swap Levels	Third Party Data Provider
50	Aggregate Bond Issuance	Third Party Data Provider
51	Precious Metal Demand	Public Websites
52	New Mine Supply	Public Websites
53	Relative Currency Strength	Third Party Data Provider and Public Websites
54	Central Bank Balance Sheet	Public Websites
55	Gold Trading Volume & Investment Demand	Public Websites
56	TIP Spreads	Third Party Data Provider
57	TIP Demand	Third Party Data Provider
58	Moving Average Convergence Divergence	Third Party Data Provider
59	Aggregate Momentum	Third Party Data Provider

Table 2. AI Macro signals and data sources

ID	Signal	Primary Data Source
1	Country Level GDP	Third Party Data Provider and Public Websites
2	Forecasted GDP & GDP Growth	Third Party Data Provider and Public Websites
3	Consumer Price Index	Third Party Data Provider and Public Websites
4	Interest Rates by Country	Third Party Data Provider and Public Websites
5	Retail Sales	Third Party Data Provider and Public Websites
6	Housing Starts	Third Party Data Provider and Public Websites
7	Unemployment	Third Party Data Provider and Public Websites



8	Non-Farm Payrolls	Third Party Data Provider and Public Websites
9	Money Supply	Third Party Data Provider and Public Websites
10	Producer Price Index	Third Party Data Provider and Public Websites
11	Consumer Confidence	Third Party Data Provider and Public Websites
12	Remittance Data	Third Party Data Provider and Public Websites
13	Precious Metal Mining & Production	Public websites
14	Agricultural GDP	Public websites
15	Gross National Income	Public websites
16	Underemployment Index	Public websites
17	Central Bank Leadership Sentiment	Public websites
18	Central Bank Leadership Influence	Public websites
19	Net Import Exports	Third Party Data Provider
20	PPI	Third Party Data Provider
21	Total National Debt	Third Party Data Provider

Table 3. AI News signals and data sources

ID	Signal Classification	Primary Data Source
1	News Sentiment	Public Websites
2	Headline Frequency	Public Websites
3	Social Med Sentiment	Public Websites
4	Media Engagement	Public Websites
5	Legal Involvement	Public Websites
6	Production loss	Public Websites
7	Earnings Revision	Public Websites
8	Crisis Response	Public Websites
9	Regulatory Changes	Public Websites
10	Natural Disaster	Public Websites



11	Customer sentiment	Public Websites
12	New Products	Public Websites
13	Strategic Partnership	Public Websites
14	M&A Detail	Public Websites
15	Correlated Company Sentiment	Public Websites
16	Correlated Industry Sentiment	Public Websites
17	Correlated Country Sentiment	Public Websites
18	Country Leadership Sentiment	Public Websites
19	Country Leadership Influence	Public Websites
20	Global Economic Event Impact	Public Websites
21	Central Bank Sentiment	Public Websites