

INDEX GUIDELINE

AGING OF AMERICA INDEX

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 Aging of America Index (the "INDEX"). Any amendments to the rules made to the GUIDELINE are approved by the INDEX COMMITTEE specified in Section 5.5. The INDEX is owned, 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

Category	Description
Asset Class	Multi Asset
Strategy	Signal based allocation between US Equities and US treasury futures, applying a volatility layer on top.
Regional Allocation	United States
Adjustment Factor	0.75%
Rebalancing Frequency	Daily

1.2. IDENTIFIERS AND PUBLICATION

The INDEX is published under the following identifiers:

Name	ISIN	Currency	Type	RIC	BBG ticker
Aging of America Index	DE000SL0L805	USD	ER*	.SOLAOAD	SOLAOAD 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) 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 31/05/2017, the START DATE, is 100. Historical values from the 06/08/2024, 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 back-tested.

1.4. PRICES AND CALCULATION FREQUENCY

The level of the INDEX is calculated for each CALCULATION DAY on the following week day based on the CLOSING PRICES of the INDEX COMPONENTS.



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.



2. INDEX COMPONENTS

The INDEX consists of the following INDEX COMPONENTS

Component	Name	Currency	RIC	BBG Ticker
1 (Equity)	Solactive Aging of America TR Index	USD	.SOLAOA	SOLAOA Index
2 (Fixed Income)	Solactive Future Series 5-Day Roll 10y Treasury Note Fed Funds Total Return USD Index	USD	.SOF5TYT0	SOF5TYT0 Index
3 (Cash)	Federal Funds Rate	USD	USONFFE=	FEDL01 Index

The first INDEX COMPONENT is therefore the EQUITY COMPONENT (EQ), while the second INDEX COMPONENT is the FIXED INCOME COMPONENT (FE).

In the following document, the reference to the EQUITY COMPONENT may happen via its component number (1) or the EQ sub-script.

Similarly, the reference to the FIXED INCOME COMPONENT may happen via its component number (2) or the FI sub-script.

Note that prior to the EQUITY COMPONENT SUBSTITUTION DATE, the Equity Component was the "Motif Capital Aging of America Index" (MCAOI Index). Further, prior to the FIXED INCOME COMPONENT SUBSTITUTION DATE, the Fixed Income Component was the "US Government Bond Futures Rolling Strategy Index" (FRSIUSB Index)

2.1. SELECTION OF THE INDEX COMPONENTS

The list of INDEX COMPONENTS is fixed.

2.2. WEIGHTING OF THE INDEX COMPONENTS

The INDEX allocates the exposure across INDEX COMPONENTS in accordance with a rules-based approach, which considers a momentum signal and weights restrictions related to volatility of the INDEX COMPONENTS.

This rules-based approach is described in detail in the following sections.





3. CALCULATION OF THE INDEX

3.1. ASSET VALUE CALCULATION

The asset value for the equity component and the fixed income component are calculated according to the following formula ($i \in \{FE, EQ\}$)

$$A_{i,t} = A_{i,t-1} * \frac{CP_{i,t}}{CP_{i,t-1}}$$

Where:

$A_{i,t}$ The asset level of Index Component i as of CALCULATION DAY t

$A_{i,t-1}$ The asset level of Index Component i as of CALCULATION DAY $t-1$

$CP_{i,t}$ The Closing Price of Index Component i as of CALCULATION DAY t

$CP_{i,t-1}$ The Closing Price of Index Component i as of CALCULATION DAY $t-1$

The asset value for the cash component is calculated according to:

$$A_{3,t} = Cash_t = Cash_{t-1} * (1 + rate_{t-1} * DCF_{t-t,t})$$

Where:

$rate_{t-1}$ The level of Federal Funds Rate as of CALCULATION DAY $t-1$

$DCF_{t-t,t}$ The day count fraction, which equals the number of calendar days between CALCULATION DAY $t-1$ (including) and CALCULATION DAY t (excluding), divided by 360.

3.2. FIXED INCOME MOMENTUM SIGNAL CALCULATION

The fixed income momentum signal for a certain look-back period as of any CALCULATION DAY t , denoted as $FI_momentum_signal_t^{lb}$, is calculated according to the following formula:

$$\begin{aligned} FI_return_t^{lb} > 0, & \text{ then } FI_momentum_signal_t^{lb} = 1 \\ FI_return_t^{lb} \leq 0, & \text{ then } FI_momentum_signal_t^{lb} = 0 \end{aligned}$$

Where $FI_return_t^{lb}$ is the fixed income return as of that CALCULATION DAY and look-back period:



$$FI_return_t^{lb} = \frac{252}{N_t^{lb}} * \sum_{s \in lb} \ln \left(\frac{A_{FI,s+1}}{A_{FI,s}} \right)$$

With:

N_t^{lb} The number of CALCULATION DAYS within the relevant look-back period lb

s The set of CALCULATION DAYS within the relevant look-back period lb

lb The look-back period, where $lb \in \{short, medium, long\}$

As indicated above, there are three different look-back periods: a long-term, and medium-term and a short-term look-back period.

The long-term look-back period ($lb = long$) on any given CALCULATION DAY is defined as the period from (and including) the day which is *nine* calendar months before the second CALCULATION DAY prior to the given CALCULATION DAY (or, if any such date is not a Calculation Day, the preceding CALCULATION DAY) to (and including) the third CALCULATION DAY prior to the given CALCULATION DAY.

The medium-term look-back period ($lb = medium$) on any given CALCULATION DAY is defined as the period from (and including) the day which is *six* calendar months before the second CALCULATION DAY prior to the given CALCULATION DAY (or, if any such date is not a Calculation Day, the preceding CALCULATION DAY) to (and including) the third CALCULATION DAY prior to the given CALCULATION DAY.

The short-term look-back period ($lb = short$) on any given CALCULATION DAY is defined as the period from (and including) the day which is *three* calendar months before the second CALCULATION DAY prior to the given CALCULATION DAY (or, if any such date is not a Calculation Day, the preceding CALCULATION DAY) to (and including) the third CALCULATION DAY prior to the given CALCULATION DAY.

3.3. UNSCALED TARGET WEIGHT CALCULATION

The unscaled target weight of the EQUITY COMPONENT and the FIXED INCOME COMPONENT as of a certain CALCULATION DAY t and a look-back period lb is calculated according to:

$$w_unscaled_target_{EQ,t}^{lb} = \min \left(target_weight_max, \frac{target_vol}{component_realized_vol_{EQ,t}^{lb}} \right)$$



$$w_unscaled_target_{FI,t}^{lb} = \min \left(target_weight_max, \frac{target_vol}{component_realized_vol_{FI,t}^{lb}} \right) * FI_momentum_signal_t^{lb}$$

Where:

target_vol The level of the volatility target, 5%

target_weight_max the maximum target weight of 150%

The component realized volatility as of CALCULATION DAY *t* and a look-back period *lb* is calculated according to ($i \in \{FE, EQ\}$):

$$component_realized_vol_{i,t}^{lb} = \sqrt{\frac{252}{N_t^{lb}} * \sum_{s \in lb} \left(\ln \left(\frac{A_{i,s+1}}{A_{i,s}} \right) \right)^2}$$

3.4. TARGET WEIGHT CALCULATION

The target weight of the EQUITY COMPONENT and the FIXED INCOME COMPONENT as of a certain CALCULATION DAY *t* and a look-back period *lb* is calculated according to ($i \in \{FE, EQ\}$):

$$w_target_{i,t}^{lb} = w_unscaled_target_{i,t}^{lb} * \frac{\min(weight_max, \sum_{j=1}^2 w_unscaled_target_{j,t}^{lb})}{\sum_{j=1}^2 w_unscaled_target_{j,t}^{lb}}$$

The final target weights are calculated by averaging the look-back specific target weights across the three look-back periods $i \in \{FE, EQ\}$:

$$w_target_{i,t} = \frac{1}{3} \sum_{s \in lb} w_target_{i,t}^{lb}$$

The target weight for the cash component will be calculated according to:

$$w_target_{Cash,t} = 1 - w_target_{FI,t} - w_target_{EQ,t}$$



3.5. UNDERLYING ASSET WEIGHT CALCULATION

The underlying asset weight for each INDEX COMPONENT i is calculated based on the target weights by averaging the target weights over the weight averaging period:

$$w_{i,t} = \frac{1}{22} * \sum_s w_{target_{i,t}}$$

The weight averaging period on any CALCULATION DAY t is the period from (but excluding) the day which is 22 CALCULATION DAYS prior to the given CALCULATION DAY to (and including) the given CALCULATION DAY.

3.6. BASKET LEVEL CALCULATION

The level of the basket is calculated according to:

$$B_t = B_{t-1} * \left(1 + \sum_{i=1}^3 w_{i,t} * \left(\frac{A_{i,t}}{A_{i,t-1}} - 1 \right) \right)$$

3.7. VOL TARGET LEVEL CALCULATION

The level of the volatility target index is calculated as follows:

$$VT_t = VT_{t-1} * \left(\frac{B_t}{B_{t-1}} * w_{t-1}^B + \frac{Cash_t}{Cash_{t-1}} * (1 - w_{t-1}^B) \right)$$

Where:

w_{t-1}^B The basket weight as of CALCULATION DAY $t-1$

The basket weight is calculated as:

$$w_t^B = \min \left(100\%, \frac{VolCap}{base_index_realized_vol_t} \right)$$



Where:

<i>VolCap</i>	The volatility cap of 5%
<i>basket_index_realized_vol_t</i>	The realized volatility of the basket

The realized volatility of the basket is calculated as:

$$base_index_realized_vol_t = \sqrt{\sum_{i,j}^3 w_{i,t} * w_{j,t} * AssetCovariance_{i,j,t}}$$

With:

$$AssetCovariance_{i,j,t} = \frac{252}{N_t} * \sum_s \left(\ln \left(\frac{A_{i,s+1}}{A_{i,s}} \right) * \ln \left(\frac{A_{j,s+1}}{A_{j,s}} \right) \right)$$

The summation is done over all CALCULATION DAYS within the volatility cap period. This is the period from (and including) the day which is *one* calendar month (or, if any such date is not a CALCULATION DAY, the preceding CALCULATION DAY) before the second CALCULATION DAY prior to the given CALCULATION DAY to (and including) the third CALCULATION DAY prior to the given CALCULATION DAY.

3.8. INDEX LEVEL CALCUALTION

The level of the index is calculated as follows:

$$Index_t = Index_{t-1} * \left(\frac{VT_t}{VT_{t-1}} - rate_{t-1} * DCF_{t-t,t} \right) * e^{(-adj_factor * DCF_{t-1,t})}$$

Where:

<i>e</i>	Euler's number, a constant approximately equal to 2.71828
<i>adj_factor</i>	The adjustment factor of 0.75% per annum (accruing daily).



3.9. ACCURACY

The level of the INDEX will be rounded to 2 decimal places. CLOSING PRICES will be used with publication precision.

3.10. 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/>.

3.11. 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.



4. MISCELLANEOUS

4.1. 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.

4.2. 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](https://www.solactive.com/news/announcements/)", which is available at <https://www.solactive.com/news/announcements/>. The date of the last amendment of this INDEX is contained in this GUIDELINE.

4.3. 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.



4.4. 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 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 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/>.

4.5. INDEX COMMITTEE

An index committee composed of staff from SOLACTIVE and its subsidiaries (the “INDEX 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 INDEX 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/>.



5. 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 every weekday from Monday to Friday. A day on which the New York Stock Exchange (NYSE) is not open for general business is not a CALCULATION DAY.

The “CLOSING PRICE” in respect of an INDEX COMPONENT and a CALCULATION DAY is an INDEX COMPONENTS final regular-hours closing level as calculated by Solactive

“EQUITY COMPONENT” is the component #1 from Section 2

“EQUITY COMPONENT SUBSTITUTION DATE” is 23/06/2020

“FIXED INCOME COMPONENT” is the component #2 from Section 2

“FIXED INCOME COMPONENT SUBSTITUTION DATE” is 06/08/2024

“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 reflected in the INDEX.

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

“INDEX UNIVERSE” is the sum of all financial instruments which fulfill the INDEX UNIVERSE REQUIREMENTS.

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

“INDEX COMMITTEE” shall have the meaning as defined in Section 5.5.

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

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



6. HISTORY OF INDEX CHANGES

Version	Date	Description
1.0	04 July 2024	Index Guideline creation (<i>initial version</i>)

CONTACT

Solactive AG
German Index Engineering
Platz der Einheit 1
60327 Frankfurt am Main
Germany

Tel.: +49 (0) 69 719 160 00

Fax: +49 (0) 69 719 160 25

Email: info@solactive.com

Website: www.solactive.com

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