

INDEX GUIDELINE

Solactive USD Corporate IG PAB Index Family

Version 2.0

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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 Solactive Euro IG Corporate IG PAB Index (the “INDEX”). Any amendments to the rules made to the GUIDELINE are approved by the OVERSIGHT COMMITTEE specified in the Bond Index Methodology. 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 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 of financial instruments or investment funds referencing the INDEX under a valid license – 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 INDEX is a rules-based index, engineered to measure the performance of USD denominated investment grade corporate debt. The index provides exposure to a portfolio, which is based on ISS ESG climate analysis and is in line with a 1.5°C scenario through 2050. At the same time the index displays very similar credit and interest rate risk distributions compared to the Solactive USD IG Corporate Index (BENCHMARK INDEX).
- To achieve the 1.5°C scenario, the weighted GROSS GHG EMISSIONS and GHG INTENSITY of the INDEX is reduced compared to the BENCHMARK INDEX.
- At the launch GROSS GHG EMISSIONS as well as GHG INTENSITY of the INDEX are reduced by a minimum of 50% compared to the Benchmark. Throughout the life of the index the GROSS GHG EMISSIONS as well as the GHG INTENSITY of the Index must always fulfill the SELF-DECARBONIZATION TRAJECTORY as well as the 50% reduction against the BENCHMARK INDEX.
- On a semi-annual basis, for the selection days in January and July, the GROSS GHG EMISSIONS and GHG INTENSITY of the index are reduced to be in line with a yearly SELF-DECARBONIZATION TRAJECTORY of at least 7%.
- The basis in time for the SELF-DECARBONIZATION TRAJECTORY is the BASE DATE.

1.2. IDENTIFIERS AND PUBLICATION

The INDEX is published under the following identifiers:

Name	ISIN	Currency	Type	Calculation Formula*	RIC	BBG ticker
Solactive USD Corporate IG PAB Index	DE000SLOAY04	USD	TR	Periodic	.SOLUIGPAB	SOLUIPAB Index
Solactive USD Corporate IG PAB GBP Index	DE000SLODHJ4	GBP	TR	Periodic	.SOLUIGGB	-
Solactive USD Corporate IG PAB GBP Hedged Index	DE000SLODHL0	GBP	CH	Periodic	.SOLUICGB	-
Solactive USD Corporate IG PAB EUR Index	DE000SLOBS27	EUR	TR	Periodic	.SOLUIEPAB	-
Solactive USD Corporate IG PAB EUR Hedged Index	DE000SLOBS35	EUR	CH	Periodic	.SOLUCHPAB	-

*The calculation formula refers to the index calculation's dependency on cash reinvestment, based on whether the cash reinvestment occurs on a daily/direct basis or periodically



*TR means that the INDEX is calculated as Total Return index as described in the Bond Index Methodology, which is available on the SOLACTIVE website: <https://www.solactive.com/documents/bond-index-methodology/>

*CH means that the Index is calculated as Currency Hedge Index, as described in the Currency Hedged Index Methodology, which is available on the SOLACTIVE website: <https://www.solactive.com/documents/currency-hedged-general-methodology/>

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 Börse 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

Levels of the INDEX published for a period prior to the LIVE DATE have been back-tested. Historical values from the LIVE DATE will be recorded in accordance with Article 8 of the BMR.

Name	RIC	Live Date	Initial Value
Solactive USD Corporate IG PAB Index	.SOLUIGPAB	01.12.2020	1007.75
Solactive USD Corporate IG PAB GBP Index	.SOLUIGGB	01.12.2020	1007.75
Solactive USD Corporate IG PAB GBP Hedged Index	.SOLUICGB	05.07.2023	630.14
Solactive USD Corporate IG PAB EUR Index	.SOLUIEPAB	22.11.2021	1000
Solactive USD Corporate IG PAB EUR Hedged Index	.SOLUCHPAB	22.11.2021	1000

1.4. PRICES AND CALCULATION FREQUENCY

The INDEX is calculated and distributed once every BUSINESS DAY based on the LAST EVALUATED BID PRICES of the INDEX COMPONENTS. Bonds added in a rebalancing (see Section 3) are included the INDEX at the LAST EVALUATED ASK PRICE on the relevant REBALANCE DAY (as specified in Section 3.3). Bonds which are excluded from the INDEX in a rebalance are reflected in the calculation of the level of the INDEX for the REBALANCE DAY at the LAST EVALUATED BID PRICE on the relevant REBALANCE DAY. INDEX analytical values are calculated each BUSINESS DAY using the LAST EVALUATED BID PRICES based on FIXING TIME. Prices of INDEX COMPONENTS not listed in the INDEX CURRENCY are converted using the WM 4 PM London Fixing quoted by Reuters.

The currency hedged indices are calculated based on TRADING PRICES on the exchanges on which the UNDERLYING INDEX COMPONENTS are listed. TRADING PRICES of the UNDERLYING INDEX COMPONENTS not listed in the INDEX CURRENCY are converted using the current Intercontinental Exchange (ICE) spot foreign exchange rate. Should there be no current TRADING 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.

In addition to the intraday calculation a closing level of the INDEX for each CALCULATION DAY is also calculated. This closing level is based on the CLOSING PRICES for the UNDERLYING INDEX and 4:00 p.m. New York time WM Spot and Forward Fixings quoted by Reuters. If there is no 4:00 pm New York



time WM Fixing for the relevant CALCULATION DAY, the last available 4:00 p.m. New York time WM Fixing will be used for the closing level calculation.



2. INDEX SELECTION

On each SELECTION DAY, all bonds which meet the INDEX COMPONENT REQUIREMENTS are eligible for inclusion in the INDEX and will be added as INDEX COMPONENT on the REBALANCE DAY. Additionally, on each SELECTION DAY, it will be evaluated whether all current INDEX COMPONENTS still meet the INDEX COMPONENT REQUIREMENTS. Each INDEX COMPONENT that does not meet the INDEX COMPONENT REQUIREMENTS will be removed from the INDEX on the next REBALANCE DAY.

2.1. SELECTION OF THE INDEX COMPONENTS

The initial composition of the INDEX, as well as any selection for a rebalance (as specified in Section 3) is determined by using the following rules:

- A price from the PRICING PROVIDER must be available for each INDEX COMPONENT on each SELECTION DAY
- All INDEX COMPONENTS must be a member of the BENCHMARK INDEX.

All bonds and their issuers are evaluated based on the criteria outlined in the table below. Bonds which do not comply the screens are excluded from the INDEX. The evaluation is based on data provided by the ESG DATA PROVIDER:

Theme	Topic	Exclusion criterion
Norm-Based Research	Environment	Verified failure to respect established norms as well as severe or very severe controversies
	Human Rights	
	Corruption	
	Labour Rights	
Controversial Weapons Research	Chemical weapons	Verified or alleged ongoing involvement
	Biological weapons	
	Nuclear weapons	
	Depleted Uranium	
	Nuclear weapons outside the NPT	
	Cluster munitions	
Activity-Based Screening	Anti-personnel mines	
	Coal mining and power generation	
	Fossil fuel production, exploration, distribution, and services.	
	Electric power generation from fossil fuel sources	
	Tobacco Cultivation & Production	



Environmental Objectives	Sustainable Development Goal 12: Responsible Consumption and Production	Significant Negative Impact, i.e. single SDG Impact Rating of < -5.0
	Sustainable Development Goal 13: Climate Action	
	Sustainable Development Goal 14: Life Below Water	
	Sustainable Development Goal 15: Life on Land	
Explanation: % figures refer to revenue threshold (for degree of involvement)		

(the “INDEX COMPONENT REQUIREMENTS”)

The determination of the INDEX COMPONENTS is fully rule-based and the INDEX ADMINISTRATOR has no discretion.

2.1.1 SELECTION OF THE INDEX CURRENCY COMPONENTS

Based on the INDEX CURRENCY UNIVERSE, the initial composition of the INDEX as well as any selection for an ordinary rebalance is determined on the SELECTION DAY in accordance with the following rules (the “INDEX CURRENCY COMPONENT REQUIREMENTS”):

- All currencies from the INDEX CURRENCY UNIVERSE

2.2. WEIGHTING OF THE INDEX COMPONENTS

On each SELECTION DAY each INDEX COMPONENT is weighted using an optimization algorithm which determines the optimal weights of each INDEX COMPONENT. The weights are set in such a fashion that the average GROSS GHG EMISSIONS of the INDEX is at its required level while all rating buckets, maturity buckets, sector buckets and turnover constraints are met. The constraints are defined as follows:

- Weighted GROSS GHG EMISSIONS must be equal or lower to the REGULATORY TARGET GHG EMISSIONS
- Weighted GHG INTENSITY must be equal to the TARGET GHG INTENSITY.
- Rating Bucket – the weight of each rating bucket (AAA, Aa1, Aa2, etc.) in the INDEX may only deviate by +/-2.5% from the weight of the same bucket in the BENCHMARK INDEX.
- Maturity Bucket – the weight of each maturity bucket (1-5 Years, 5-10 Years, 10-15 Years, 15-20 Years, 20-25 Years, 25+ Years) in the INDEX is only allowed to deviate by +/- 1% from the weight of the same bucket in the BENCHMARK INDEX.
- Sector Bucket – the weight of each sector bucket in the INDEX is only allowed to deviate by +/-2.5% from the weight of the same bucket in the BENCHMARK INDEX.



- Issuer Bucket – the weight of each issuer in the INDEX is only allowed to deviate by +/- 2% from the weight of the same issuer in the BENCHMARK INDEX, unless the issuer is excluded from the INDEX.
- The maximum issuer weight must be smaller than 3%.
- INDEX COMPONENTS – the weight of each INDEX COMPONENT is only allowed to deviate by +0.2% and -0.02% from the weight of the INDEX COMPONENT in the BENCHMARK INDEX, unless the component is excluded from the Index.
- Turnover – turnover is defined as two-way turnover. The turnover of the INDEX is limited to exceed the monthly turnover of the BENCHMARK INDEX by 5%. Turnover is calculated using all information as of SELECTION DAY.
- In case the optimization is unable to find a feasible solution the constraints are loosened in the following order:
 - Turnover constraint is widened to 7.5%
 - Turnover constraint is widened to 10%
 - Issuer deviation is widened to 2.5%
 - Issuer absolute weight is widened to 4%
 - Sector deviation is widened to 5%

2.2.1 WEIGHTING OF THE INDEX CURRENCY COMPONENTS

On each SELECTION DAY, the weight of each INDEX CURRENCY COMPONENT is assigned according to the aggregated weights of all the UNDERLYING INDEX COMPONENTS quoted in the respective currency.



3. ORDINARY REBALANCE

In order to reflect the new selection of the INDEX COMPONENTS determined on the SELECTION DAY (in accordance with Section 2.1) the INDEX is adjusted on the REBALANCE DAY after CLOSE OF BUSINESS.

For more information on the rebalance procedure please refer to the Bond Index Methodology, which is incorporated by reference and available on the SOLACTIVE website: <https://www.solactive.com/documents/bond-index-methodology/>.

SOLACTIVE will publish any changes made to the INDEX COMPONENTS with sufficient notice before the REBALANCE DAY on the SOLACTIVE webpage.

4. CORPORATE ACTIONS

As part of the INDEX maintenance SOLACTIVE will consider various events – also referred to as corporate actions – which result in an adjustment to the INDEX between two regular REBALANCE DAYS. Such events have a material impact on the price, weighting or overall integrity of INDEX COMPONENTS. Therefore, they need to be accounted for in the calculation of the INDEX. Adjustments to the INDEX to account for corporate actions will be made in compliance with the Bond Index Methodology.



5. DEFINITIONS

“BASE DATE” is 31/01/2022.

“BENCHMARK INDEX” is the Solactive USD Investment Grade Corporate Index (SOLUSIGC).

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

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

“BUSINESS DAY” with respect to the INDEX each day Monday to Friday except banking holidays as defined by the New York Stock Exchange (NYSE) and SIFMA. The SIFMA holiday recommendations are set out on the following website (or any successor page): <https://www.sifma.org/resources/general/holiday-schedule/>

“CLOSE OF BUSINESS” is a time stamp when an INDEX is calculated.

“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. **“ESG DATA PROVIDER”** is ISS. For more information, please visit: <https://www.issgovernance.com/>.

“FIXING TIME” is the time when the prices for the INDEX COMPONENTS are fixed for index calculation. [This is specified in the Bond Index Methodology, which is available on the SOLACTIVE website: <https://www.solactive.com/documents/bond-index-methodology/>.]

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

“GROSS GHG EMISSIONS” are the Greenhouse Gas Emissions of a company. As provided by the ESG DATA PROVIDER. GROSS GHG EMISSIONS are updated annually.

“GHG INTENSITY” is a metric which is used to normalize GROSS GHG EMISSIONS across different companies. Normalization is done by dividing the GROSS GHG EMISSIONS of an issuer by the book value of equity and the book value of debt of the respective issuer.

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

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

“INDEX CALCULATOR” is SOLACTIVE or any other appropriately appointed successor in this function.

“INDEX COMPONENT” is each bond reflected in the INDEX.

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

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

“INDEX CURRENCY COMPONENTS” is each currency on which UNDERLYING INDEX COMPONENT trades in the market.

“INDEX CURRENCY UNIVERSE” is the sum of all currencies which fulfill the INDEX CURRENCY UNIVERSE REQUIREMENTS.

“INDEX CURRENCY UNIVERSE REQUIREMENTS” shall have the meaning as defined in Section 2.1.1

“ISSUER” is the issuing entity of the respective bond.



"LAST EVALUATED ASK PRICE" the last available evaluated ask price by the designated PRICING PROVIDER.

"LAST EVALUATED BID PRICE" the last available evaluated bid price by the designated PRICING PROVIDER.

"OVERSIGHT COMMITTEE" shall have the meaning as defined in Section 5.5.

"PRICING PROVIDER" is the ICE.

"REBALANCE DAY" is the last BUSINESS DAY of the month.

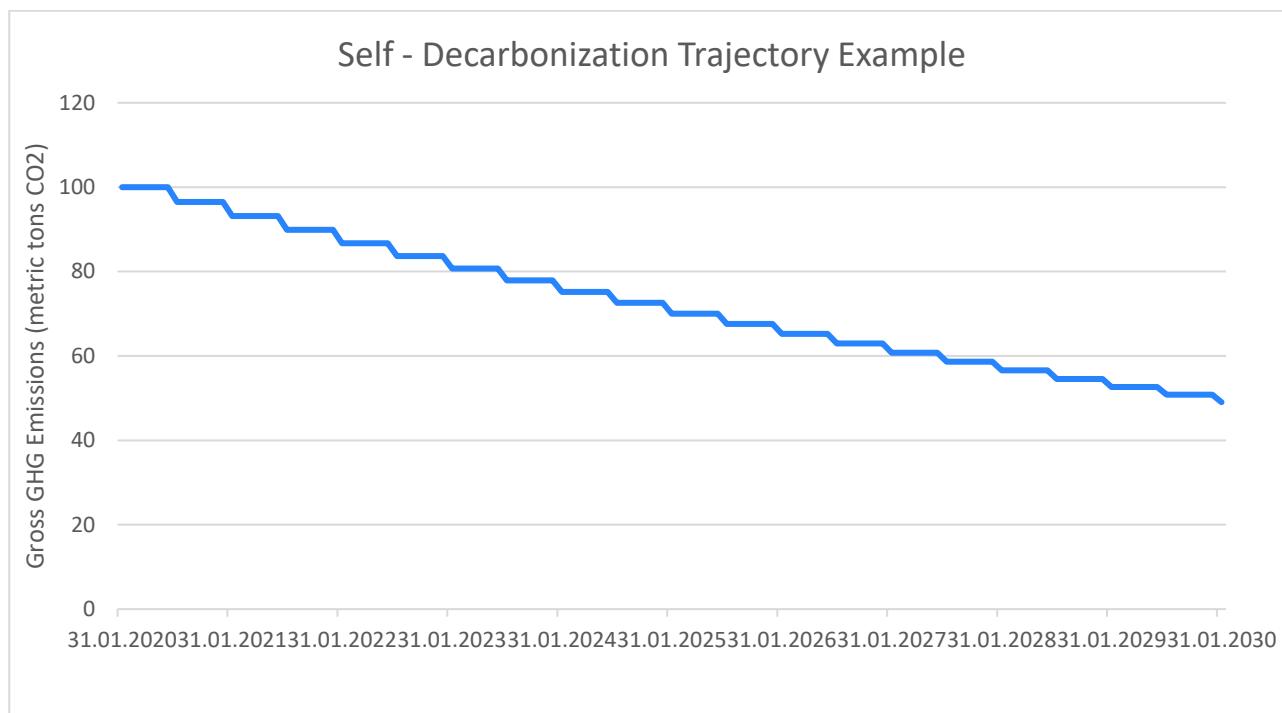
"REGULATORY TARGET GHG EMISSIONS" is the average emission level required. Until the first self-decarbonization this is a 50% reduction versus the BENCHMARK INDEX. In the following periods this is the minimum between the SELF-DECARBONIZATION TRAJECTORY or a 50% reduction versus the BENCHMARK INDEX.

"SELECTION DAY" is 3 BUSINESS DAYS before the scheduled REBALANCE DAY, disregarding any potential change of the REBALANCE DAY.

For currency hedged indices, the selection day is equal to the rebalance day and rebalancing frequency is monthly.

"SELF-DECARBONIZATION TRAJECTORY": The INDEX follows a self-decarbonization trajectory of at least 7% annually. The decarbonization trajectory is defined by an annual minimum Gross GHG Emissions / GHG Intensity reduction of 7% compared to the GROSS GHG EMISSIONS / GHG INTENSITY of the INDEX on the BASE DATE in a geometric progression. The 7% annual reduction is split into two 3.5% semi-annual reductions which become effective in the end of January and end of July.

In the following chart a hypothetical self-decarbonization trajectory for an Paris-aligned index with GROSS GHG EMISSIONS of 100 at the BASE DATE 31/01/2020 is shown. To be compliant with the self-decarbonization trajectory the Gross GHG Emissions of the hypothetical index must always on or below the self-decarbonization trajectory.



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

“SPOT” is the spot foreign exchange rate to convert the currency of the INDEX COMPONENT into the denomination of the INDEX CURRENCY.

“TARGET GHG INTENSITY” is the average GHG INTENSITY level required to fulfill the optimization constraint. Until the first self-decarbonization this is a 50% reduction versus the BENCHMARK INDEX. Otherwise, this is the minimum between the SELF-DECARBONIZATION TRAJECTORY and a 50% reduction versus the BENCHMARK INDEX.

“TRADING PRICES” 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.

“UNDERLYING INDEX COMPONENTS” is each security reflected in the composition of the UNDERLYING INDEX.

Please note that the definitions included in the Bond Index Methodology apply to this guideline. In case of a discrepancy, the definition presented in the guidelines should prevail.



6. HISTORY OF INDEX CHANGES

Version	Date	Description
1.0	1 December 2020	Index Guideline creation (<i>initial version</i>)
1.01	24 August 2021	Clarification of exclusion criteria
1.1	12 January 2022	Update of BASE DATE due to Scope 3 GHG emission measurement methodology change of the ESG DATA PROVIDER; for more background see the announcement at https://www.solactive.com/methodology-change-all-solactive-owned-administered-eu-climate-transition-benchmarks-and-eu-paris-aligned-benchmarks-based-on-institutional-shareholder-services-iss-data-effective-date-05-01-2/ .
1.2	31 July 2023	Added currency version SOLUIGGB
2.0	5 December 2024	Family Index Guideline including: SOLUIGPAB SOLUCHPAB SOLUIEPAB SOLUICGB SOLUIGGB

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