

Guideline relating to

**Solactive Eurozone Rendite Plus 1-10 Bond Index**

Version 1.1 dated December 3rd, 2015



## Introduction

### 1 Index specifications

- 1.1 Short name and ISIN
- 1.2 Initial value
- 1.3 Distribution
- 1.4 Prices and calculation frequency
- 1.5 Weighting
- 1.6 Decision-making bodies
- 1.7 Publication
- 1.8 Historical data
- 1.9 Licensing

### 2 Composition of the Index

- 2.1 Selection of the Index Components
- 2.2 Ordinary adjustment
- 2.3 Extraordinary adjustment

### 3 Calculation of the Index

- 3.1 Index formula
- 3.2 Accuracy
- 3.3 Adjustments

### 4 Definitions

- 4.1 Index-specific definitions
- 4.2 Further definitions

### 5 Appendix

- 5.1 Contact data
- 5.2 Calculation of the Index – change in calculation method

This document contains the underlying principles and regulations regarding the structure and operation of the Solactive Eurozone Rendite Plus 1-10 Bond Index. Solactive AG shall make every effort to implement the relevant regulations. 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 index value at any given point in time nor in any other respect. The Solactive Eurozone Rendite Plus 1-10 Bond Index is the sole property of Solactive AG. 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 calculation and publication of the index by Solactive AG is not 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.

# Introduction

This document is to be used as a guideline with regard to the composition, calculation and management of the Solactive Eurozone Rendite Plus 1-10 Bond Index. Any changes made to the guideline are initiated by the Committee specified in section 1.6. The Solactive Eurozone Rendite Plus 1-10 Bond Index is the sole property of Solactive AG. The Solactive Eurozone Rendite Plus 1-10 Bond Index is calculated and published by Solactive AG. The name “Solactive” is copyrighted.

## 1 Index specifications

The Solactive Eurozone Rendite Plus 1-10 Bond Index is a rules-based, market value weighted index engineered to mirror the performance of the higher yielding segment of Eurozone investment grade government bonds.

The Solactive Eurozone Rendite Plus 1-10 Bond Index is calculated as a Total Return Index with coupon payments being directly reinvested into the index and a Price Return Index, i.e. coupon payments will not be considered in the index calculation.

### 1.1 Name and ISIN

The Solactive Eurozone Rendite Plus 1-10 Bond Index is distributed under ISIN DE000SLA07W3; the WKN is SLA07W. The Index is published in Reuters under the code .SOLERP and in Bloomberg under the code SOLERP Index.

The Solactive Eurozone Rendite Plus 1-10 Bond Index TR is distributed under ISIN DE000SLA1NA4; the WKN is SLA1NA. The Index is published in Reuters under the code .SOLERPTR.

### 1.2 Initial value

The index will be calculated every Business Day starting on the 1<sup>st</sup> of September 2015. Before this date the index values are backfilled until 4<sup>th</sup> of January 2010, with the index value based on 1000 as at the close of trading on 4<sup>th</sup> of January 2010.

### 1.3 Distribution

The Solactive Eurozone Rendite Plus 1-10 Bond Index is published via the price marketing services of Boerse Stuttgart AG and is distributed to all affiliated vendors.

### 1.4 Prices and calculation frequency

The Solactive Eurozone Rendite Plus 1-10 Bond Index is calculated based on the Evaluated Bid Price (see 4.2 Further Definitions) of the respective Index Components. The index is calculated and distributed hourly every Business Day. Bond and index analytical values are calculated each Business Days using the Last Evaluated Price. New bonds are included in the index at their Evaluated Ask Price. Weight increases of a bond (due to an ordinary or extraordinary index adjustment) are taken into account at the Evaluated Ask Price.

Updated index values and other statistics will not be distributed. In the event that the data required for index calculation purposes is not available or that there are troubles regarding the price marketing of Solactive AG or Stuttgart Stock exchange the index cannot be distributed.

## 1.5 Weighting

The Index Components are weighted according to their respective Market Values in proportion to the aggregated Market Value of all Index Components in the index.

A capping of 20% per country is applied. The capping factors of the Total Return Index are considered for the Price Return Index.

## 1.6 Decision-making bodies

A Committee composed of staff from Solactive AG is responsible for decisions regarding the composition of the Solactive Eurozone Rendite Plus 1-10 Bond Index, as well as any amendments to the rules (hereinafter referred to as the "**Committee**" or the "**Index Committee**"). The Committee will also determine the future composition of the Solactive Eurozone Rendite Plus 1-10 Bond Index if any Extraordinary Event (see chapter 2.3) occurs, as well as the implementation of any necessary adjustments.

Members of the Committee can recommend at any time changes to the composition of the Index or to the guideline and submit them to the Committee for approval. Any change of the guideline will be announced on the web page <http://www.solactive.com>.

## 1.7 Publication

All specifications and information relevant for calculating the index are made available on the <http://www.solactive.com> web page and sub-pages.

## 1.8 Historical data

Historical data will be maintained from 4<sup>th</sup> of January 2010.

## 1.9 Licencing

Licences to use the index as the underlying value for derivative instruments are issued to stock exchanges, banks, financial services providers and investment houses by Solactive AG.

## **2 Composition of the Index**

### **2.1 Selection of the Index Components**

At the launch of the index, all financial instruments which meet the requirements of the Selection Pool are eligible for inclusion in the index. Instruments issued prior to the Selection Day and which meet the criteria of the Selection Pool as defined under 4.1 will be added on the monthly Adjustment Day to the Selection Pool. Additionally, on the quarterly Selection Day, the Index Committee will evaluate whether all current Index Components still meet the requirements of the Selection Pool. Any Index Components that do not pass this screen will be removed from the Index on the next Adjustment day.

Extraordinary adjustments are possible as described under 2.3.

### **2.2 Ordinary adjustment**

The composition of the index is ordinarily reviewed on the quarterly Selection Day, which occurs six business days prior to the Adjustment day. Any change to the index will be implemented on the Adjustment Day, the last business day of January, April, July and October.

### **2.3 Extraordinary adjustment**

The Index Committee will decide about the future composition and the implementation of any necessary adjustments of the Solactive Eurozone Rendite Plus 1-10 Bond Index if an Extraordinary Event (early redemption, credit event etc.) regarding one or more index constituents occurs. See details under 3.3 Adjustments

The Index Committee will decide on the future composition of the Solactive Eurozone Rendite Plus 1-10 Bond Index as well as the Business Day which marks the starting of the new adjusted index composition.

### 3 Calculation of the Index

#### 3.1.1 Index formula

The Solactive Eurozone Rendite Plus 1-10 Bond Index is an index whose value reflects the relative changes in bond values. Therefore the composition and weighting is adjusted every quarter.

The Total Return Index is calculated using the following formula:

$$\text{Totalreturn}_{t,i} = \frac{\text{Price}_{t,i} + \text{ACCInt}_{t,i} + \text{PaidCash}_{t,i}}{\text{Price}_{t-1,i} + \text{ACCInt}_{t-1,i}} - 1$$

$$\text{weighting}_{t,i} = \frac{(\text{Price}_{t,i} + \text{ACCInt}_{t,i}) * \text{Amount}_{SD,i} * \text{Cap}_{SD,i}}{\sum_{i=1}^a (\text{Price}_{t,i} + \text{ACCInt}_{t,i}) * \text{Amount}_{SD,i} * \text{Cap}_{SD,i}}$$

$$\text{Index}_t = \text{Index}_{t-1} * (1 + \sum_{i=1}^a (\text{Totalreturn}_{t,i} * \text{weighting}_{t-1,i}))$$

The Price Return Index is calculated using the following formula:

$$\text{Priceretur}_{t,i} = \frac{\text{Price}_{t,i}}{\text{Price}_{t-1,i}} - 1$$

$$\text{weighting}_{t,i} = \frac{\text{Price}_{t,i} * \text{Amount}_{SD,i} * \text{Cap}_{SD,i}}{\sum_{i=1}^a \text{Price}_{t,i} * \text{Amount}_{SD,i} * \text{Cap}_{SD,i}}$$

$$\text{Index}_t = \text{Index}_{t-1} * (1 + \sum_{i=1}^a (\text{Priceretur}_{t,i} * \text{weighting}_{t-1,i}))$$

Whereas:

$\text{Totalreturn}_{t,i}$	=	Total return of the bond i on trading day t
$\text{Priceretur}_{t,i}$	=	Price return of the bond i on trading day t
$\text{Index}_t$	=	Value of the index on trading day t
$\text{Index}_{t-1}$	=	Value of the index on trading day t-1
$\text{Price}_{i,t}$	=	Price of the bond i on trading day t

$Price_{i,t-1}$	=	Price of the bond i on trading day t-1
$ACCI_{i,t}$	=	Accrued Interest of the bond i on trading day t (for the avoidance of doubt the index takes into account a settlement convention of t+3)
$ACCI_{i,t-1}$	=	Accrued Interest of the bond i on trading day t-1 (for the avoidance of doubt the index takes into account a settlement convention of t+3)
$Weighting_{t,i}$	=	Weighting of the bond i on trading day t
$Amount_{SD,i}$	=	Amount Outstanding of bond i on the last Selection Day SD
$PaidCash_{i,t}$	=	a) Value of the coupon payment for bond i on trading day t b) If a bond i will be removed from the index, the resulting payment of the bond will be included in the paid cash component
$Cap_{i,SD}$	=	Parameter used to scale the weighting of bond i to fulfill weighting requirements described in 1.5 defined on Selection Day SD

## 3.2 Accuracy

The value of the index will be rounded to two decimal places.

The index does not take taxes into account and assumes gross coupon payments for the Total Return Index.

## 3.3 Adjustments

Indices need to be adjusted for systematic changes in prices once these become effective. The Committee will decide from time to time if the Solactive Eurozone Rendite Plus 1-10 Bond Index needs to be adjusted.

The following corporate actions will result in changes or adjustments to an index as indicated below between Adjustment Days:

(a) Early Redemption or Full Call: The bond proceeds will be reinvested into the index on the effective date. For the avoidance of doubt a Tender must be mandatory, the pure offer to tender a bond will not lead to an adjustment of the index.\*

(b) Flat Trading: A bond is flat trading if the bond issuer will not meet its coupon payment obligation which means that the buyer of a bond is not responsible for paying the interest that has accrued since the last payment. If a bond is defined to be “flat trading” between two Adjustment Days the respective accrued interests and coupons will be set to 0. The bond will not be removed until the next Adjustment Day.

(c) Defaulted Bonds: If the status of a bond status changes to “In Default”, the bond will be removed from the index at the last available Evaluated Bid Price.

(d) Exchange Offers:

1) Optional Exchange Offers: Optional Exchange Offers will not result in an adjustment of the index.\*

2) Mandatory Exchanges Offers:

- a. In case more than 90% of the Amount Outstanding is exchanged the exchange will be considered in the index calculation by exchanging the relevant bonds, so that the new bond will receive the weight of the old exchanged bond.

- b. In case less than 90% of the Amount Outstanding is exchanged the exchange will not be considered to be an event that affects the relevant bond's position in the index.

(e) Fungible Bonds:

- 1) The parent bond and the sub-tranche are both index constituents: Both bonds are kept in the index until the next Adjustment Day. On the next Adjustment Day the new bond will be removed and the Amount Outstanding of the parent bond will be increased by the amount of the new bond issue.
- 2) The parent bond is an index constituent and the sub-tranche is not: On the next Adjustment Day the Amount Outstanding of the parent bond will be increased by the amount of the sub-tranche.
- 3) The parent bond is not an index constituent but the sub-tranche is: On the next Adjustment Day the sub-tranche leaves the index and the parent bond enters the index including the Amount Outstanding added from the sub-tranche (assuming that it meets the requirements of the Selection Pool).

(f) Rating Downgrade:

Ratings are reviewed monthly on the Business Day 6 days prior to the last Business Day of each month.

- 1) If there is a downgrade affecting one particular Index Component (i.e. an Index Component is not rated Investment Grade as defined in section 4.1) it will be replaced after COB on the last Business Day of the month. The replacement bond is a bond issued by the respective country that is selected based on the ranking criteria described in section 4.1.
- 2) If a country is downgraded all bonds from that country will be replaced after COB on the last Business Day of the month. The replacement country is determined by selecting the country with the highest 5y yield within the pool of remaining Eurozone countries that are not yet part of the index. Up to 5 bonds are selected based on the ranking criteria described in section 4.1.

(g) Debt issuances: Debt issuances of an existing bond will not be considered until the next Adjustment Day.

\*For the avoidance of doubt, an optional tender or exchange offer may lead to an index adjustment after the end of the submission period. In case the tender or exchange has been successful for at least 90% of the amount outstanding the bond will be removed from the index/exchanged into the relevant bond.



## 4. Definitions

### 4.1 index-specific definitions

The “**Selection Pool**” comprises bonds that fulfill the following conditions:

- (a) Issued by a Selected Eurozone Government
- (b) Denominated in EUR
- (c) Amount Outstanding of at least 2bn EUR
- (d) Remaining time to maturity of 1 - 10 years
- (e) A minimum rating of BBB- by Standard & Poor's or Baa3 by Moody's Investors Service is required. For the avoidance of doubt if one of the rating agencies rates the bond as Investment Grade it is eligible for inclusion in the index
- (f) Only fixed coupon bonds without any kind of embedded options are eligible for inclusion. For the avoidance of doubt, amongst others, the following bonds are excluded: Callable Bonds, Puttable Bonds, Sinking Fund Bonds, Convertible Bonds, Inflation-linked Bonds, Equity-linked Bonds, Contingent Capital Securities, Covered Bonds, Preferred Securities, Securitized Bonds, Floating Rate Bonds or Fixed-to-float Bonds
- (g) For a bond to be included in the index, a price must be available from a recognized bond price provider as determined by the Index Committee

Only 5 bonds per country are included. The bonds are selected based on the following criteria:

1. Higher Amount Outstanding
2. Longer time to maturity
3. Current index component
4. More recent issue date

In case there are less than 5 bonds all bonds are selected.

The pool of “**Selected Eurozone Governments**” comprises those 6 Eurozone countries with the highest 5y yield among all countries that fulfil the following criteria:

- (a) Countries must be a member of the Eurozone
- (b) There must be at least two bonds that fulfil the criteria mentioned above.

To ensure comparability of yields the yield of a theoretical bond with exactly 5 years remaining time to maturity is derived from a linear interpolation. For each country two bonds will serve as the reference bonds: Bond A is a bond with a maturity of exactly 5 or a higher time to maturity that is closest to 5, Bond b is a bond with smaller time to maturity that is closest to 5. In case there are no bonds that have a higher time to maturity than 5, the two bonds with a lower time to maturity that is closest to 5 are selected. In case there are no bonds that have a smaller time to maturity than 5, the two bonds with a higher time to maturity that is closest to 5 are selected.

The 5y yield is derived from the following linear interpolation:

$$Yield_{5y} = Yield_A + \frac{(Yield_B - Yield_A)}{(TTM_B - TTM_A)} \cdot (5 - TTM_A)$$

Whereas:

$Yield_{5y}$	Interpolated Yield of bond with a time to maturity of 5 years
$Yield_A$	Yield of Bond A
$TTM_A$	Time to maturity of Bond A

## 4.2 Further definitions

**“Adjustment Day”** is the last Business Day of January, April, July and October.

**“Amount Outstanding”** is the face value of the respective bond.

A **“Business Day”** in relation to the index is each day Monday to Friday except common European banking holidays. Common European banking holidays are Good Friday, Easter Monday, Christmas Day, Boxing Day and New Years Day.

**“Call”** means that a bond with a callable feature will be redeemed before the actual maturity date of the bond. The callable feature allows the issuer of the bond to retain the privilege of redeeming the bond before the actual maturity date.

**“Contingent Convertible Capital Securities”** are bonds that will be converted into equity if a certain trigger event takes place or written down.

**“Convertible Bonds”** are bonds that can be converted into a predetermined amount of the company's equity at certain times during its life.

**“Covered Bonds”** are bonds backed by cash flows or mortgages or public sector loans.

A **“Credit Event”** is the suspension of debt service, insolvency or failure to pay on time.

**“Early Redemption”** includes every event that leads to a redemption of a bond before the actual maturity date.

**“Exchange Offer”** means that the holder of a bond is invited to exchange the existing bond to another debt security.

In particular an **“Extraordinary Event”** is

- an early redemption of the bond
- a credit event

**“Fixed Coupon Bonds”** are bonds with a fixed coupon rate, as opposed to floating rate Coupons.

A bond is **“Flat Trading”** if the bond issuer will not meet its coupon payment obligation which means that the buyer of a bond is not responsible for paying the interest that has accrued since the last payment.

**“Floating Rate Bonds”** are bonds with a variable or floating interest rate, i.e. coupons fluctuate in line with the underlying level of interest rates, as opposed to fixed-rate coupons.

**“Fungible Bond”** A **“Fungible Bond”** is a new issue that has all the same specifications as an existing issue (bonds with the same parameters can be issued in different tranches). At a specific date the tranches will be combined into one bond. After this date the parent tranche will include the Amount Outstanding of all new tranches.

A bond is **“In Default”** if the issuer is not able to fulfil its bond payment obligations anymore after the 30 days grace period.

The **“Index Calculator”** is Solactive AG or any other appropriately appointed successor in this function.

**“Index Components”** are all bonds in the Selection Pool.

The **“Index Currency”** is EUR.

**“Inflation-linked Bonds”** are bonds whose principal is indexed to inflation.

**“Investment Grade”** are all ratings above BBB- by Standard & Poor's or Baa3 by Moody's Investors Service .

**“Issuer”** is the issuing entity of the respective bond.

**“Last Evaluated Price”** generally is (aside from the rules referred to in „Extraordinary Events“) the last available Evaluated Bid Price for current index members and the last Evaluated Ask Price for additions.

**“Paid Cash”** is either the value of the coupon payments between Adjustment Days or the resulting payment when a bond is removed from the index between Adjustment Days. Paid Cash is invested directly on the effective date into the index.

**“Preferred Securities”** combine both debt and equity characteristics.

A **“Price Return Index”** reflects pure price movements of the underlying bonds.

**“Securitized Bonds”** are bonds secured against specific assets or receivables (ABS), mortgages (MBS) or cash flows.

**“Selection Day”** is a Business Day 6 Business Days prior to the Adjustment Day.

**“Sinking Fund Bonds”** are bonds that are backed by a fund that sets aside money on a regular basis. A sinkable bond issuer is required to buy a certain amount of the bond back from the purchaser at various points throughout the life of the bond.

**“Tender Offer”** means that a holder of a bond is invited to tender the bond for a specific price at a specific time before the actual maturity date.

## **5 Appendix**

### **5.1 Contact data**

#### **Information regarding the Solactive Eurozone Rendite Plus 1-10 Bond Index concept**

Solactive AG  
Guiollettstraße 54  
60486 Frankfurt am Main  
Tel.: +49 69 719 160 00  
Fax: +49 69 719 160 25  
indexing@solactive.com

### **5.2 Calculation of the Index – change 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, which he 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. The Index calculator will make announcements regarding the amendment of the index guideline. 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.