GUIDELINE

Solactive US Treasury Bond Index Family

Version 1.1 dated as of 9th of March 2018

Contents

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Introduction

This document is to be used as a guideline with regard to the composition, calculation and management of the Solactive US Treasury Bond Index Family. The Solactive US Treasury Bond Index Family consists of:

1. Solactive US Treasury Bond Index
2. Solactive US 1-3 Year Treasury Bond Index
3. Solactive US 3-10 Year Treasury Bond Index
4. Solactive US 10-20 Year Treasury Bond Index
5. Soalctive US 20+ Year Treasury Bond Index

Any changes made to these guidelines are initiated by the Committee specified in section 1.5. The Solactive US Treasury Bond Index Family is the sole property of Solactive AG. All indices in the Solactive US Treasury Bond Index Family are calculated and published by Solactive AG. The name "Solactive" is copyrighted.

1 Index Specifications

All indices of the Solactive US Treasury Bond Index Family are rules-based and designed to measure the performance of the respective US Treasury bond market in USD. The Solactive US Treasury Bond Index is comprised of Treasuries with all maturities. The sub – indices are comprised of Treasury securities with an according time to maturity. All indices are calculated as total return indices.

1.1 Name and ISIN

All indices in the Solactive US Treasury Bond Index Family are distributed under the following ISINs. The Indices are published in Reuters under the following symbol:

Name	ISIN	Reuters RIC	Bloomberg Ticker
Solactive US Treasury Bond Index	DE000SLA4CA1	.SOLUT	TBC
Solactive US 1-3 Year Treasury Bond Index	DE000SLA4B65	.SOLUT13	TBC
Solactive US 3-10 Year Treasury Bond Index	DE000SLA4B73	.SOLUT310	TBC
Solactive US 10-20 Year Treasury Bond Index	DE000SLA4B81	.SOLUT120	TBC
Soalctive US 20+ Year Treasury Bond Index	DE000SLA4B99	.SOLUT20	TBC

1.2 Initial Values and History

Each index is calculated every Business Day after the 10th of October 2017. All indices of the Solactive US Treasury Index Family began at a value of 1000 on Dec 29th, 2006. For each index, 10 years of back tested history is available beginning Dec 29th, 2006.

1.3 Distribution

All indices of the Solactive US Treasury Index Family are published via the distribution platform of Boerse Stuttgart AG and is distributed to all affiliated vendors.

1.4 Prices and Calculation Frequency

The Solactive US Treasury Bond Index Family is calculated based on bid prices of the respective index constituents. New securities will enter the index at their ask price. Prices are received from S&P Capital IQ, or any appointed successor.

The index is calculated at the close (approximately 5 p.m. E.S.T) using prices from 3 p.m. E.S.T. and distributed each Business Day. For the back tested data prices from 4 p.m. E.S.T were used.

In the event that pricing data cannot be provided or that there are issues regarding the index value dissemination of Solactive AG or Börse Stuttgart the index affected cannot be distributed.

1.5 Decision-making Bodies

A Committee composed of Solactive AG employees is responsible for decisions regarding the composition of the Solactive US Treasury Bond Index Family as well as any amendments to the guidelines (hereinafter referred to as the "**Committee**" or the "**Index Committee**"). The Committee determines the composition of the Solactive US Treasury Bond Index Family when any extraordinary event (see chapter 2.1 & 2.2) occurs and implementing any necessary adjustments.

Members of the Committee can recommend changes to the composition of an Index or to these guidelines at any time and submit them to the Committee for approval.

1.6 Publication

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

1.7 Historical Data

The launch date of the index is Oct 10th, 2017. Ten years of back tested data is available prior to the launch date and beginning on Dec 29th, 2006.

2 Eligible Bonds and Rebalancing

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

(a) Treasury Bond/Treasury Note of the US government
(b) Denominated in USD
(c) Current SOMA adjusted amount outstanding of at least USD 250 million
(d) Inflation linked bonds, callable bonds, floating rate, fungible strips, principal only strips, interest only strips and local government bonds are specifically excluded from the available universe
(e) The following rules in terms of remaining maturity apply
    a. Solactive US Treasury Bond Index
        i. All eligible securities must have at least 1 year until maturity from the selection date.
    b. Solactive US Treasury 1-3 Year Bond Index
        i. All eligible securities must have at least 1 year until maturity but less than 3 years from the selection date.
    c. Solactive US Treasury 3-10 Year Bond Index
        i. All eligible securities must have at least 3 years until maturity but less than 10 years from the selection date.
    d. Solactive US Treasury 10-20 Year Bond Index
        i. All eligible securities must have at least 10 years until maturity but less than 20 years from the selection date.
    e. Solactive US Treasury 20+Year Bond Index
        i. All eligible securities must have at least 20 years until maturity from the selection date.

For the avoidance of doubt, besides the Selection Pool criteria and reweighting mentioned above, the types of changes which are implemented on a monthly basis on the respective Adjustment Day will include:

- Adjustments to amount outstanding due to re-opening, repurchases, stripping increases etc.
- Removal of Bonds that no longer meet the amount outstanding requirements due to partial or early redemptions.

2.1 Selection of the Index Constituents

The index constituents will be selected on each Selection Day, which is the 7th business day before the Adjustment Day. The actual index rebalancing will take place on the last business day of each month on the Adjustment Day. On the Adjustment day all bonds that fulfil the criteria laid down under 2 are selected as index components.

2.2 Intra-Adjustment Period Changes

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

(a) Full Tender, Early Redemption or Full Call, the bond proceeds will be reinvested into the index at the next rebalance. For the avoidance of doubt a tender must be mandatory, the pure offer to tender a bond will not lead to an index change.

(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 date.

(c) Defaulted bonds: If a bond's status changes to "in default" it will be removed from the index at the last available evaluated price from the pricing source.

(d) Exchange offers:
    1) optional exchange offers are not considered in the index;
    2) mandatory exchanges offers: In the case that 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; and
    mandatory exchanges offers: In the case that less than 90% of the amount outstanding is exchanged the exchange will not be considered in the index calculation.

Note: Debt issuances of an existing bond will not be considered by the index until the next Adjustment Day.

2.3 Weighting

All index components are weighted according to their market value. The market value is calculated as the Dirty price multiplied by the respective deducted Amount Outstanding of the bond. The deducted amount outstanding is calculated as the current amount outstanding minus the amount that is held by the Federal Reserve SOMA Account.

3 Calculation of an Index

3.1 Index formula

The Total Return indices are calculated using the following formula:

$$Index_t = Index_n \frac{MarketValue_t + PaidCash_t}{BaseValue_n}$$

$$MarketValue_t = \sum_{i=1}^{a} (Dirty\,\mathrm{Price}_{i,t} \cdot Amount_{i,rb} \cdot Capfactor_{i,rb})$$

$$PaidCash_t = \sum_{i=1}^{a} Coupon_{i,t} \cdot Amount_{i,rb} \cdot Capfactor_{i,rb}$$

$$BaseValue_n = \sum_{i=1}^{a} (Dirty\,\mathrm{Price}_{i,n} \cdot Amount_{i,rb} \cdot Capfactor_{i,rb})$$

Where:

$Index_t$ = Index value of the Portfolio on Business Day t.

$Index_n$ = Index value on the last Adjustment Day n.

$Dirty\,\mathrm{Price}_{i,t}$ = Dirty Price of the bond i on Business Day t, where Dirty Price t is the sum of the clean price of the bond i on Business Day t and the accrued interest on Business Day t, taking into account the settlement convention of t+1.

$Dirty\,\mathrm{Price}_{i,n}$ = Dirty Price of the bond i on the last Adjustment Day n, where Dirty Price is the sum of the clean price of the bond i on the last Adjustment Day n and the accrued interest on the last Adjustment Day n, taking into account the settlement convention of t+1.

$Amount_{i,n}$ = Deducted Amount Outstanding of bond i on the last Selection Day rb

$PaidCash_t$ = a) Value of the coupon payments between Adjustment Days.

b) If a bond i will be removed from the portfolio between Adjustment Days, the resulting payment of the bond will be included in the Paid Cash component of the portfolio.

On the next Adjustment Day “Paid Cash” will be reinvested in the portfolio.

$Coupon_{i,t}$ = Coupon payment of bond i between payment date and Adjustment Day n. In case there is no coupon payment, Coupon i,t is 0.

$Capfactor_{i,rb}$ = Weighting Cap Factor of portfolio component i determined on Selection day rb, to cap the weighting as described under Index Rebalancing and Weighting. Cap factors are not applicable for the Solactive US Treasury Index Family

3.2 Accuracy

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

According to the terms of the bond, the index calculator will take the following conventions into account:

Act/Act

Act/360

Act/365

30/360

ISMA 30/360

The indexes do not take taxes into account and assume gross coupon payments. The index assumes a settlement convention of t+0 for each bond.

4. Definitions

In particular an **“extraordinary event”** is:

- an early redemption of the bond;
- an exchange of a bond into another one; or
- a credit event.

A **“credit event”** is the suspension of debt service, insolvency or failure to pay.

"Ask price" is the Evaluated price submitted by the pricing source that indicates the price for which a seller will accept to sell.

"Bid price" is the Evaluated price submitted by the pricing source that indicates the price for which a buyer will accept to buy.

A “**Business Day**” is in relation to the index, any day other than a Saturday or Sunday and which is not a holiday according to SIFMA and the NYSE.

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

The **“index currency”** is USD for the index.

“Selection Day” is a business day 7 business days prior to the Adjustment Day.

“Adjustment Day” is the last Business Day of the month.

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

“Deducted Amount Outstanding” is calculated as the current amount outstanding minus the amount that is held by the Federal Reserve in the SOMA Account.

5 APPENDIX

5.1 Contact data

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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. 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.