

# INDEX GUIDELINE

Solactive NOK Fixed Duration Government Bill & Bond 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 NOK Fixed Duration Government Bill & Bond Index (the "INDEX"). Any amendments to the rules made to the GUIDELINE are approved by the OVERSIGHT COMMITTEE as 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 Solactive NOK Fixed Duration Government Bill & Bond Index is designed to mirror the total performance of Norwegian government bonds and bills issued in NOK while applying a fixed DURATION target per index.

Index Family includes the following sub-indices:

- Target duration 0.25 year: Solactive NOK 0.25 Year Duration Government Bill & Bond Index
- Target duration 0.5 year: Solactive NOK 0.5 Year Duration Government Bill & Bond Index
- Target duration 1 year: Solactive NOK 1 Year Duration Government Bill & Bond Index
- Target duration 3 year: Solactive NOK 3 Year Duration Government Bill & Bond Index
- Target duration 5 year: Solactive NOK 5 Year Duration Government Bill & Bond Index

#### 1.2. IDENTIFIERS AND PUBLICATION

The INDEX is published under the following identifiers:

Name	ISIN	Currency	Туре	Calculation Formula*	RIC	BBG ticker
Solactive NOK 0,25 Year Duration Government Bill & Bond Index	DE000SL0AYR8	NOK	TR	Periodic	.SOL1X	-
Solactive NOK 0,5 Year Duration Government Bill & Bond Index	DE000SL0AYS6	NOK	TR	Periodic	.SOL2X	-
Solactive NOK 1 Year Duration Government Bill & Bond Index	DE000SL0AYT4	NOK	TR	Periodic	.SOL3X	SOL3X
Solactive NOK 3 Year Duration Government Bill & Bond Index	DE000SL0AYU2	NOK	TR	Periodic	.SOL4X	SOL4X
Solactive NOK 5 Year Duration Government Bill & Bond Index	DE000SL0AYV0	NOK	TR	Periodic	.SOL5X	SOL5X

\*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: <u>https://www.solactive.com/documents/bond-index-methodology/</u>

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: <u>https://www.solactive.com/news/announcements/</u>.

#### 1.3. INITIAL LEVEL OF THE INDEX

The initial level of the INDEX on the LIVE DATE is 1000. Levels of the INDEX published for a period prior to this date have been back-tested. Historical values from the LIVE DATE will be recorded in accordance with Article 8 of the BMR.

#### **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 in the INDEX at the LAST EVALUATED BID PRICES on the relevant REBALANCE DAY. 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 PRICES 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 4:00PM London WM Fixing quoted by Reuters.

## 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 each INDEX, as well as any selection for a rebalance (as specified in Section 3) is determined using the following rules:

Solactive NOK Fixed Duration Government Bonds & Bills Index Family:

- Only Central Government Bonds and Central Treasury Bills issued by the governments of Norway denominated in NOK.
- Bond Type: FIXED COUPON BONDS are eligible for the index.
- Minimum amount outstanding NOK 15 billion per bond and NOK 1 billion per bill
- A price from the PRICING PROVIDER must be available for each INDEX COMPONENT on each SELECTION DAY

The family includes 5 indices each having a specific target duration (modified duration) as follows:

Solactive Index Ticker	Target duration (modified duration)				
SOL1X	0.25 years				
SOL2X	0.5 years				
SOL3X	1 year				
SOL4X	3 years				
SOL5X	5 years				

For Solactive NOK Fixed Duration Government Bonds & Bills Index with target duration for SOL1X and

SOL2X:

- Only Bills are eligible
- Up to 4 bonds will be selected by creating two distinct portfolios:



- Portfolio 1 (upper band): selecting the two closest bonds in terms of duration which have a higher duration than the target DURATION
- Portfolio 2 (lower band): selecting the two closest bonds in terms of duration which have a lower duration than the target DURATION
- In case no bonds are available for the upper or lower portfolio, the index will be composed by the closest bond to target DURATION

For Solactive NOK Fixed Duration Government Bonds & Bills Index with target duration for SOL3X:

- Only Bills and Bonds are eligible
- Up to 4 bonds will be selected by creating two distinct portfolios:
  - Portfolio 1 (upper band): selecting the two closest bonds in terms of duration which have a higher duration than the target DURATION
  - Portfolio 2 (lower band): selecting the two closest bonds in terms of duration which have a lower duration than the target DURATION
  - In case no bonds are available for the upper or lower portfolio, the index will be composed by the closest bond to target DURATION

For Solactive NOK Fixed Duration Government Bonds & Bills Index with target duration for SOL4X and

SOL5X:

- Only Bonds are eligible
- Up to 4 bonds will be selected by creating two distinct portfolios:
  - Portfolio 1 (upper band): selecting the two closest bonds in terms of duration which have a higher duration than the target DURATION
  - Portfolio 2 (lower band): selecting the two closest bonds in terms of duration which have a lower duration than the target DURATION
  - In case no bonds are available for the upper or lower portfolio, the index will be composed by the closest bond to target DURATION

(the "INDEX COMPONENT REQUIREMENTS")

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

#### 2.2. WEIGHTING OF THE INDEX COMPONENTS

On each SELECTION DAY each INDEX COMPONENT is weighted using the market value based on the LAST



EVALUATED BID PRICES and accrued interest as on the SELECTION DAY in order to achieve the aim of the INDEX.

To be able to reach the target duration of each index, we apply a cap factor for each bond. The capping factor is calculated as follows:

• To calculate the market value weights of each portfolio based on the weights of each bond, we use:

$$W_{p1} = W_{p1b1} + W_{p1b2}$$
  
 $W_{p2} = 1 - W_{p1}$ 

Where  $W_{p1}$ = weight portfolio upper band

 $W_{p2}$  = weight portfolio lower band

 $W_{p1b1}$  = weight of the first bond in portfolio upper band

 $W_{p1b2}$  = weight of the second bond in portfolio upper band

• The portfolio duration is calculated as follows:

$$\begin{split} d_{p1} &= W_{p1b1} * d_{p1b1} + W_{p1b2} * d_{p1b2} \\ d_{p2} &= W_{p2b1} * d_{p2b1} + W_{p2b2} * d_{p2b2} \end{split}$$

Where  $d_{p1}$  = Duration of portfolio upper band

 $d_{p2}$  = Duration of portfolio lower band  $d_{p1b1}$  = Duration of the first bond in portfolio upper band  $d_{p1b2}$  = Duration of the second bond in portfolio upper band  $d_{p2b1}$  = Duration of the first bond in portfolio lower band  $d_{p2b2}$  = Duration of the second bond in portfolio lower band  $w_{p2b1}$  = weight of the first bond in portfolio lower band  $w_{p2b2}$  = weight of the second bond in portfolio lower band

• Target weights per portfolio are calculated by:

$$tW_{p1} = \frac{d_{idx} - d_{p2}}{d_{p1} - d_{p2}}$$
$$tW_{p2} = 1 - tW_{p1}$$

Where  $d_{idx}$  = Fixed Duration Target

 $tW_{p1}$  = Target Duration portfolio upper band

 $tW_{p2}$  = Target Duration portfolio lower band

 By dividing the target weights by the market value weights of each portfolio the cap factor for each portfolio is calculated:

$$cf_{p1} = \frac{tw_{p1}}{W_{p1}}$$
$$cf_{p2} = \frac{tw_{p2}}{W_{p2}}$$

Where  $cf_{p1}$  = Cap factor portfolio upper band

 $cf_{p2}$  = Cap factor portfolio lower band

• The final weight per bond results from multiplying the bond market value weights with the cap factor of each portfolio:

$$Wf_{p1b1} = W_{p1b1} * cf_{p1}$$
  
 $Wf_{p1b2} = W_{p1b2} * cf_{p1}$   
 $Wf_{p2b1} = W_{p2b1} * cf_{p2}$   
 $Wf_{p2b1} = W_{p2b2} * cf_{p2}$ 

Where  $W f_{p1b1}$  = Final weight of the first bond in portfolio upper band

 $W f_{p_{1b_2}}$  = Final weight of the second bond in portfolio upper band

 $W f_{p2b1}$  = Final weight of the first bond in portfolio lower band

 $W f_{p2b2}$  = Final weight of the second bond in portfolio lower band

## 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: <u>https://www.solactive.com/documents/bond-index-methodology/</u>.

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**

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

"BMR" shall have the meaning as defined in Section "Introduction".

"BUSINESS DAY" is with respect to the INDEX each day Monday to Friday except the following sets of days: Norwegian OTC Market

"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.

"DURATION" is the modified duration.

"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 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.

"ISSUER" is the issuing entity of the respective bond.

"Oversight Committee" shall have the meaning as defined in the Bond Index Methodology.

"PRICING PROVIDER" is ICE (Intercontinental Exchange).

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

**"SELECTION DAY"** is 6 BUSINESS DAYS before the scheduled REBALANCE DAY, disregarding any potential change of the REBALANCE DAY

"SOLACTIVE" shall have the meaning as defined in Section "Introduction".

**"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.



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
2.0	26 March 2024	Update to a new Guideline Template
1.0	20 November 2020	Index Guideline creation (initial version)



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