

# INDEX GUIDELINE

Solactive Axiom Liquid Contingent Capital Global Market TR Index Series

Version 1.1

26 June 2019



## TABLE OF CONTENTS

Introduction .....	4
1 Index Specifications.....	6
1.1 Short name and ISIN.....	6
1.2 Initial value.....	6
1.3 Distribution .....	6
1.4 Prices and calculation frequency .....	6
1.5 Weighting .....	7
1.6 Oversight .....	7
1.7 Publication .....	7
1.8 Historical Data.....	7
1.9 Licensing.....	7
2 Composition of the Index .....	9
2.1 Selection of the Index components.....	9
2.2 Ordinary adjustment .....	9
3 Calculation of the Index .....	11
3.1 Index formula .....	11
3.2 Accuracy .....	12
3.3 Adjustments.....	12
3.6 Miscellaneous .....	14
3.6.1 Recalculation.....	14
3.6.2 Market Disruption .....	14
4 Definitions.....	16
5 Appendix.....	19
5.1 Contact data.....	19
5.2 Changes in calculation method .....	19



# INDEX GUIDELINE

## Introduction

Version 1.1 – 26 June 2019



# INTRODUCTION

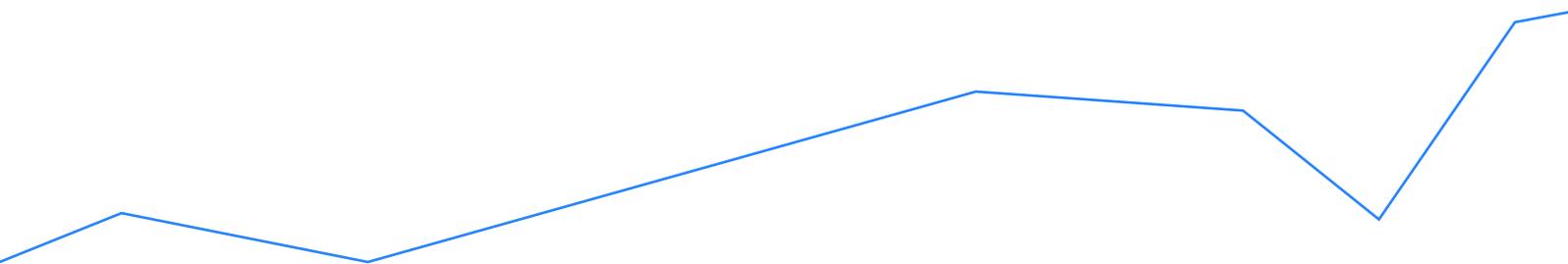
This document (the "Guideline") is to be used as a guideline with regard to the composition, calculation and maintenance of the Solactive Axiom Liquid Contingent Capital Global Market TR Index Series. Any changes made to the Guideline are initiated by the Committee specified in Section 1.6. The Index is calculated and published by Solactive AG. The name "Solactive" is trademarked.

It contains the underlying principles and rules regarding the structure and operation of the Solactive Axiom Liquid Contingent Capital Global Market TR Index Series (the "Index"). Solactive AG shall make every effort to implement the applicable 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 certain point in time nor in any other respect. The Index is owned, calculated and published by Solactive AG and it 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 publication of the Index by Solactive AG does not constitute 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.



# INDEX GUIDELINE

Index Specifications



Version 1.1 – 26 June 2019



# 1 INDEX SPECIFICATIONS

- > The Solactive Axiom Liquid Contingent Capital Global Market TR Index Series (the "Index") is an Index by Solactive AG and is calculated and distributed by Solactive AG.
- > The Solactive Axiom Liquid Contingent Capital Global Market TR Index Series ("the Index") is intended to reflect the total return performance of EUR and USD denominated AT1 and RT1 contingent convertible debt of financial institutions domiciled in developed markets.
- > The universe is composed of AT1 and RT1 securities to which additional selection criteria as specified in section 2.1 is applied. These criteria screen out undesired security types.
- > The constituents are initially weighted according to their market value.
- > The base Index is published in EUR. The hedged to EUR version of the index is available. For the hedging methodology, please consult the "Currency-hedged Indices Methodology" document, which is available on the <http://www.solactive.com> web site.

## 1.1 SHORT NAME AND ISIN

The Index series is distributed under the following identifiers:

Index	ISIN	RIC	Bloomberg Ticker
Solactive Axiom Liquid Contingent Capital Global Market TR Index	DE000SLA5640	.SOAXCOCO	N/A
Solactive Axiom Liquid Contingent Capital Global Market TR Index – EUR Hedged	DE000SLA5657	.SOLAXICC	SOLAXICC

## 1.2 INITIAL VALUE

The Index is based on 1000 at the close of trading on July 31<sup>st</sup>, 2018.

## 1.3 DISTRIBUTION

The Index is published via the price dissemination services of Boerse Stuttgart AG and is distributed to all affiliated vendors. Each vendor decides on an individual basis as to whether it will distribute/display the Index via its information systems.

## 1.4 PRICES AND CALCULATION FREQUENCY

The Index Levels are calculated on each Business Day based on the Evaluated Bid Prices of the Index Components. Newly added bonds are added at the Evaluated Ask Price. Index analytical values are calculated each Business Day using the Last Evaluated Price.

The Index is calculated every Business Day from 9:00 a.m. to 10:30 p.m., CET. In the event that data cannot be provided to the pricing services of Boerse Stuttgart AG, the Index cannot be distributed.



## 1.5 WEIGHTING

The Index Components are weighted according to their respective Market Value in proportion to the aggregated Market Value of all Index Components in the index. In the event that an issuer's weight is greater than 20%, the market value of all securities issued by such issuer will be modified by a capping factor that will reduce the securities weight in the index and ensure that the issuer does not have a concentration greater than 20% on Selection day. The weights will be adjusted by a factor that will cap all securities belonging to an issuer and redistribute their weight to all remaining uncapped securities in the index. This capping process will be repeated until no issuer in the index has a weight greater than 20% on Selection day.

## 1.6 OVERSIGHT

A Committee composed of staff from Solactive AG (the "Committee" or the "Index Committee") is responsible for decisions regarding the composition of the Index as well as any amendments to the rules.

Members of the Committee can recommend changes to the Guideline and submit them to the Committee for approval.

## 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 the launch of the Index on August 1<sup>st</sup>, 2018. No simulated index back history is available.

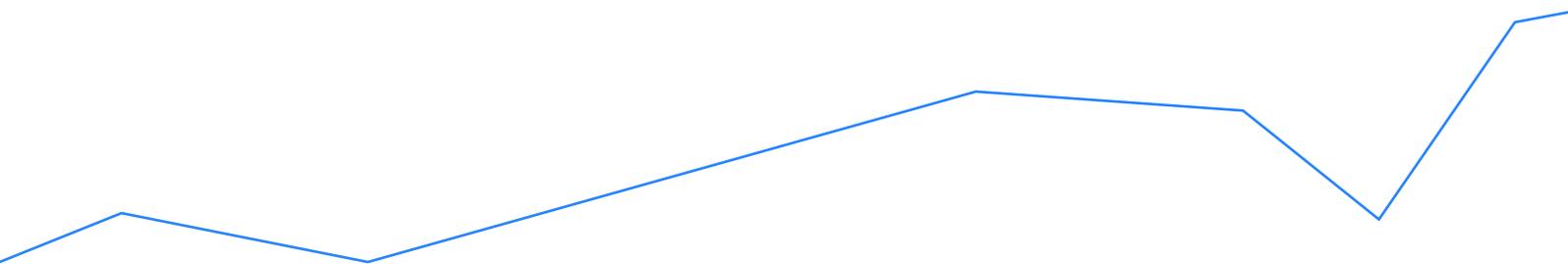
## 1.9 LICENSING

Licenses 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.



# INDEX GUIDELINE

Composition of the Index



Version 1.1 – 26 June 2019



## 2 COMPOSITION OF THE INDEX

### 2.1 SELECTION OF THE INDEX COMPONENTS

On each Selection Date, 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 below will be added on the monthly Adjustment Day to the Selection Pool. Additionally, on the monthly 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.

The Selection Pool comprises bonds that fulfill the following conditions:

- > Denominated in USD or EUR
- > No maturity date (perpetual securities only)
- > Bonds should have been issued after 01-01-2013
- > Only Contingent Convertible bonds classified as Additional Tier 1 (Basel III Denomination) or Restricted Tier 1 (Solvency II Denomination), or any equivalent non-European legislation
- > Deeply subordinated perpetual securities
- > Defined loss absorbing mechanism. A predefined trigger level for the security write-down should be available.
- > Amount outstanding greater or equal to 500 million USD or EUR, depending on the instrument's currency of denomination
- > The Country of Risk of the bonds should be one of the following: Australia, Austria, Belgium, Canada, Denmark, Finland, France, Germany, Greece, Ireland, Italy, Luxembourg, The Netherlands, New Zealand, Norway, Portugal, Spain, Sweden, Switzerland, and The United Kingdom
- > The bond issuer must have an investment grade senior rating from at least one of S&P Rating Services, Moody's Investor Service or Fitch.
- > Exclusion of 144a, senior securities, senior non-preferred securities, non-subordinated securities, amortizing or sinking bonds.

### 2.2 ORDINARY ADJUSTMENT

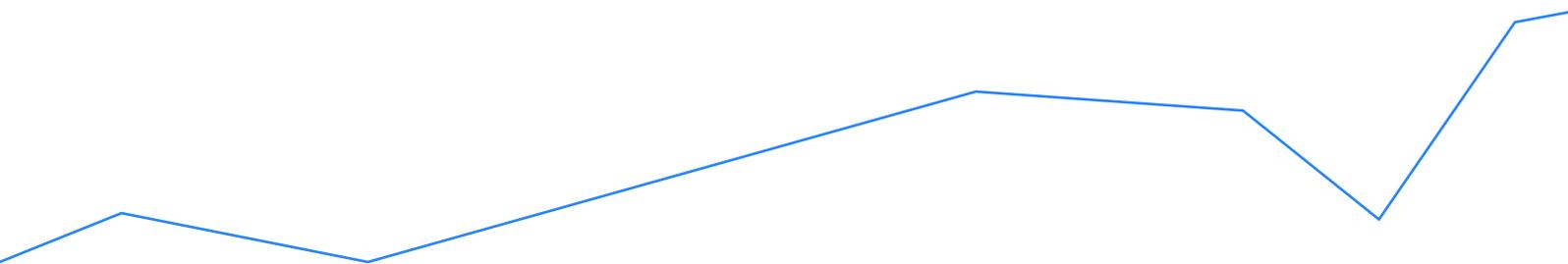
The composition of the Index is ordinarily adjusted on the Adjustment Day, which falls on the last business day of each month. Additionally, any income (e.g. resulting from coupon payments or corporate actions) is reinvested proportionally across all constituents at the end of each month.

The composition of the Index is ordinarily reviewed on the monthly Selection Day. The monthly Selection Day is 4 Business Days prior to the Adjustment Day. The weight adjustment is carried out on the business day following the selection day and becomes effective on the Adjustment Day.



# INDEX GUIDELINE

Calculation of the Index



Version 1.1 – 26 June 2019



## 3 CALCULATION OF THE INDEX

### 3.1 INDEX FORMULA

The Solactive Axiom Liquid Contingent Capital Global Market TR Index Series is calculated in Total Return format with coupon and other cash payments being reinvested on the monthly basis. The Total Return index calculation is performed according to the standard rules applied by Solactive:

As a formula:

$$Index_t = Index_n \frac{Market\ Value_t + PaidCash_t}{BaseValue_n}$$

$$Market\ Value_t = \sum_{i=1}^a (DirtyPrice_{i,t} + CPAdj_{i,t}) \cdot Amount_{i,t} \cdot Capfactor_{i,t} \cdot FX_{i,t}$$

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

$$BaseValue_n = \sum_{i=1}^a (DirtyPrice_{i,n} + CPAdj_{i,t}) \cdot Amount_{i,n} \cdot Capfactor_{i,rb} \cdot FX_{i,n}$$

Whereas:

$Index_t$  = Value of the index on Business Day t.

$Index_n$  = Value of the index on the last Adjustment Day n.

$CPAdj_{i,t}$  = Variable Coupon Adjustment Factor i on Business Day t is 0 if a bond enters the index during an ex-dividend period. If the bond is already in the index during the ex-dividend period, the Variable Coupon Adjustment Factor equals the amount of the coupon to be paid.

$DirtyPrice_{i,t}$  = Dirty Price of the bond i on Business Day t, whereas 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.

$DirtyPrice_{i,n}$  = Dirty Price of the bond i on the last Adjustment Day n, whereas 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.

$Amount_{i,n}$  = Amount Outstanding of the respective bond as defined on the last Adjustment Day n.



$Amount_{i,t}$	= Amount Outstanding of the respective bond on the day t. This amount is originally fixed on Selection day and may be adjusted intra-month as per the corporate actions treatment (e.g. fungus, full redemptions, etc.)
$PaidCash_t$	= a) Value of the coupon payments between Adjustment Days. b) If a bond i will be removed from the index between Adjustment Days, the resulting payment the bond will be included in the Paid Cash component of the index.  On the next Adjustment Day "Paid Cash" will be reinvested in the index.
$Coupon_{i,t}$	= 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 Weighting
$FX_{i,t}$	= exchange rate of bond i on day t as provided by WM 4 p.m. London fixings

## 3.2 ACCURACY

The displayed value of the Indices will be rounded to 2 decimal places.

## 3.3 ADJUSTMENTS

Indices need to be adjusted for market structure changes once they become effective. The Committee will regularly review the indices to determine if they need to be adjusted to take into account any market changes.

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

- 1) Early Redemption or Full Call: Any cash proceeds are re-invested into the index on the day that they are received. For the avoidance of doubt a Tender must be mandatory, an offer to tender a bond will not be considered for adjustment until the results have been announced.
- 2) Flat Trading: A bond is flat trading if the bond issuer is not expected to 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 be removed on the next Adjustment Day, if it is identified as Flat Trading on selection date.
- 3) Defaulted Bonds: If the status of a bond changes to "In Default", the bond will remain as part of the index or portfolio at the last available evaluated price provided by the pricing source until the next regular index Adjustment Day.



- 4) Exchange Offers:
  - a) Optional Exchange Offers: Optional Exchange Offers will not result in an adjustment of the index\*
  - b) Mandatory Exchanges Offers:
    - i. In the case when 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.
    - ii. 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.
- 5) The treatment of events for Fungible Bonds depends on whether:
  - a) 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.
  - b) 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.
  - c) The parent bond is not an index constituent but the sub-tranche is. The fund will be treated as an exchange into the parent bond, if it meets the index eligibility criteria with an amount equal to that of the sub-tranche. On the next adjustment day, the amount of the parent bond will be updated to include its full amount as of the index selection day. If the parent bond does not fulfil the selection criteria, the fund will be treated as a deletion and the sub-tranche will be removed from the index at the latest available price.
- 6) Payment-in-Kind Bonds: These bonds pay interest in additional bonds rather than in cash. Assuming the additional bonds will be sold immediately and the proceeds will be reinvested in the index, payments-in-kind are therefore considered as cash in all Total Return calculations.
- 7) Ex-dividend Bonds: "Ex-dividend" means that the next coupon is detached from the bond several days in advance of the coupon payment date. Between ex-date and pay-date a buyer of the bond does not get the right to receive the next coupon. Therefore, accrued interest is negative during that period. However, the coupon will be paid to the original bondholder, i.e. if a bond is already in the index the next coupon payment is held separate in the Variable Coupon Adjustment Factor  $CPAdj_{i,t}$ . If the bond enters the index during the ex-dividend period  $CPAdj_{i,t}$  is zero as the next coupon payment will not accrue to the index.



- 8) Bond Conversion: A bond conversion is identified when a bond's defined regulatory threshold is breached. Given the nature of the securities in this index, conversions may take place in a mechanical manner. In the event of a conversion, the bond will be removed from the index at the latest available price, emulating a call corporate action for which the call price is equal to the latest available price.

\*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.

In case of an Extraordinary Event that is not covered by the standard treatments mentioned above the Committee will meet and decide on how to treat the Extraordinary Event in the index based on the information available. An extraordinary adjustment will only be implemented if the majority of the Committee supports the suggested treatment. As soon as a decision has been taken all parties related to the index are informed about the Extraordinary Event as well as the decided treatment and date of implementation.

## 3.6 MISCELLANEOUS

### 3.6.1 Recalculation

Solactive AG makes the greatest possible efforts to accurately calculate and maintain its indices. However, the occurrence of errors in the index determination process cannot be ruled out. In such cases Solactive AG adheres to its publicly available [Correction Policy](#).

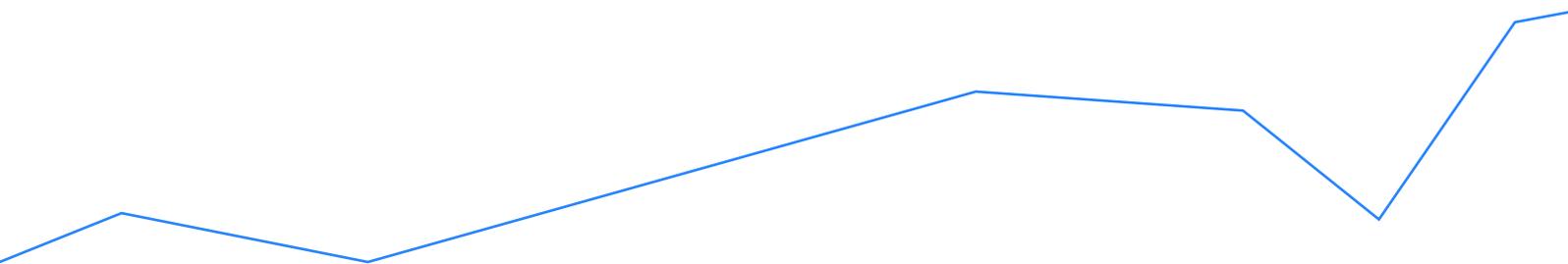
### 3.6.2 Market Disruption

In periods of market stress Solactive AG calculates its indices following predefined and exhaustive arrangements set out in its publicly available [Disruption Policy](#).



# INDEX GUIDELINE

## Definitions



Version 1.1 – 26 June 2019



## 4 DEFINITIONS

"Adjustment Day" is the last Business Day of each month.

"Amount Outstanding" is the face value of the respective bond.

"Bond Price Provider" is Interactive Data Corporation part of the ICE group.

A "Business Day" in relation to the index is each day Monday to Friday except common banking holidays for the respective index currency. Common European banking holidays are defined as Target 2 holidays and include Good Friday, Easter Monday, Christmas Day, Boxing Day and New Year's Day

A "Credit Event" is the suspension of debt service or insolvency.

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

"Effective Time to Maturity" is the minimum of the next call or put date and the final 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

A bond is "Flat Trading" if the bond issuer is not able to 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.

A bond is "In Default" once the issuer is not able to fulfil its bond payment obligations anymore after the 30 days grace period.

The "Index Currency" is EUR.

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

"Last Evaluated Ask Price" the last available evaluated Ask price by the designated Pricing Provider.



## Index Guideline

"Last Evaluated Bid Price" the last available evaluated Bid price by the designated Pricing Provider.

The "Market Value" of a bond is defined as the sum of the Last Evaluated Price and Accrued Interest multiplied by the Amount Outstanding.

"Selection Day" is a Business Day 4 Business Days prior to the Adjustment Day.

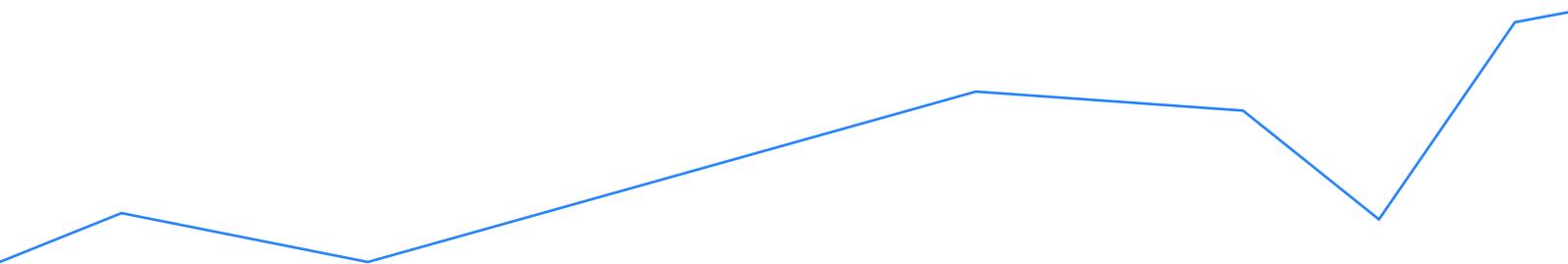
"Tender Offer" means that a holder of a bond is invited to tender the bond for a specific price at a specific time before the actual maturity date.

"Weighting Cap Factor" in the case of capping, the weighting cap factor is the factor that transforms the market value into the capped market value.



# INDEX GUIDELINE

## Appendix



Version 1.1 – 26 June 2019



# 5 APPENDIX

## 5.1 CONTACT DATA

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## 5.2 CHANGES 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 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 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.