

BENCHMARK STATEMENT

Solactive Europe Big Data Sentiment Index PR

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Authority (BaFin)



BENCHMARK STATEMENT

As an administrator of the Solactive Europe Big Data Sentiment Index PR and pursuant to Article 27 of Regulation (EU) 2016/1011 (the "**Benchmark Regulation**" or "**BMR**"), Solactive AG is obliged to publish a benchmark statement for the benchmark if it shall be used in the European Union (the "**Benchmark Statement**"). This document contains the information required pursuant to Article 27 of the BMR and Article 1 of the Commission Delegated Regulation (EU) 2018/1643.

1 GENERAL INFORMATION

- > This Benchmark Statement was created on April 20, 2019 and was last updated on September 5, 2019.
- > This Benchmark Statement relates to a specific benchmark, the Solactive Europe Big Data Sentiment Index PR (ISIN: DE000SLA7WZ9) (the "**Benchmark**" or "**Index**"), where Solactive AG acts as the "administrator" (as defined in Article 3(1)(6) of the BMR).
- > The Benchmark is determined based on readily available data and does not use any contributed input data (as defined in Article 3(1)(8) of the BMR).
- > The Benchmark is classified as a non-significant benchmark (as defined in Article 3(1)(27) of the BMR).

2 MARKET INFORMATION

The Benchmark is a quantitative and investable index developed by Solactive AG. The Benchmark is a price return index published in EUR. A price return index reflects the market price movements of the index components disregarding any payments made in respect of the index constituents, such as dividends or coupon payments. A price return index aims to reflect the price performance of a specific market, or a particular segment.

Full information regarding the market or economic reality that the Benchmark is intended to measure, the geographical boundaries (if any) of the market or economic reality as well as the procedure for rebalancing the constituents of the Benchmark are available in the index guideline at https://www.solactive.com/wp-content/uploads/2019/03/Solactive-Europe-Big-Data-Sentiment-Index_Leitfaden-4.pdf.

The selection of the index components is, among other factors and parameters, based on data provided by an external data provider (the "**Data Provider**"). Such data, which is expressed as a score value, shall reflect certain key information about potential index components and thus serve as a means of ensuring that the index continues to reflect the market or economic reality in accordance with the index's objective (the "**Data**"). In connection with the determination of this Data, it cannot be ruled out that the Data Provider may make discretionary decisions in the determination of such data. The Data Provider has confirmed to Solactive AG that where there is a discretionary decision, such decision will be recorded and can be audited by Solactive AG in detail.

The methodology of the Index has been reviewed and approved in accordance with an internal approval process.

3 INPUT DATA

The Benchmark uses input data as part of the algorithm-based calculation of the daily index values. The input data originates from a source that provides readily available data (input data) and is defined by reference to the source and the time at which the



data is observed. The Benchmark uses a single source for input data rather than utilizing a hierarchy of input data.

The risk of insufficient input data is minimal due to the high importance of such data for the usage of financial instruments. Where there is insufficient input data or if any other disruption event occurs that may result, inter alia, in inaccurate or delayed prices or a prohibition from trading for a longer time in respect of one or more constituents of the Benchmark, the affected constituent may be reflected in the Benchmark with its last available price, or may be removed from the Benchmark with no value. Such events of insufficient input data or any other disruption events may result in the market or economic reality measured by the benchmark value no longer being sufficiently reliably represented.

Such events may also result in the implementation of corporate actions, or the calculation, publication and dissemination of the Benchmark being postponed to a later time than as provided for in the index guideline.

Where there are extraordinary and unforeseeable events that are not covered (directly or by way of analogy) by the index guideline or Solactive AG's Disruption Policy, the index committee of Solactive AG (the "**Index Committee**") will use expert judgement in determining the treatment of such event.

4 CORRECTION AND RESTATEMENT

The Benchmark is calculated with the greatest possible efforts to ensure its accuracy. Nevertheless, errors in the index determination and calculation process, such as the omission or incorrect implementation of a corporate action, the use of incorrect input data or the incorrect application of the Benchmark methodology, may occur from time to time for a variety of reasons, both internal to Solactive AG and external. In accordance with a pre-determined process, errors are to be corrected with effect for the future. In addition, such errors may also result in a restatement of past index values, provided that such errors have been identified within generally two business days after the occurrence of the event leading to the error. Errors in connection with the application of management and transaction fees can result in a restatement regardless of the time of discovery. Under certain circumstances, errors will be assessed individually by the Index Committee.

5 CHANGES TO OR CESSATION OF THE BENCHMARK

Although the Benchmark is determined by a static set of rules and is intended to be comprehensive, factors, including external factors beyond the control of Solactive AG, may necessitate changes to, or the cessation of, the Benchmark. Such changes to or cessation of the Benchmark may have an adverse impact upon the financial contracts and financial instruments that reference the Benchmark or the measurement of the performance of investment funds referencing the Benchmark.

6 BENCHMARK STATEMENT UPDATES

Solactive AG will update this Benchmark Statement if the information herein is no longer correct or sufficiently precise. In particular, the Benchmark Statement will be updated as soon as practically possible whenever the type of Benchmark has changed (e.g. non-significant to significant) or whenever there is a material change to the methodology of the Benchmark.

7 OVERSIGHT COMMITTEE

Although the Benchmark applies a highly rules-based methodology that is intended to be comprehensive, it cannot be excluded that ambiguities, errors, omissions or extraordinary and unforeseeable events could occur that may have an impact on the provision of the Benchmark. Solactive AG will seek to resolve any such situation by means of the Index Committee, composed of staff of the Solactive Group. Such committee is responsible, inter alia, for decisions regarding any amendments to the methodology of the Benchmark, the treatment of any unforeseeable errors, and the correction as well as the cessation of a Benchmark.



8 MISCELLANEOUS

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CONTACT

Solactive AG
German Index Engineering
Platz der Einheit 1
60327 Frankfurt am Main
Germany

Tel.: +49 (0) 69 719 160 00
Fax: +49 (0) 69 719 160 25
Email: info@solactive.com
Website: www.solactive.com

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