

SOLACTIVE | DISRUPTION POLICY

Version 3.0

June 2017

1. INTRODUCTION

This document sets out the rules and procedures Solactive AG (“Solactive”) will apply during conditions of Market Stress occurring in the calculation process of Indices administrated by Solactive. “Index” is defined as “benchmark” within the meaning of EU Regulation 2016/1011 and the IOSCO Principles for Financial Benchmarks.

Market Stress can arise due to a variety of reasons and take several forms, but generally results in inaccurate or delayed prices for one or more constituents of an index. As a consequence the investability and tradability of certain indices may be affected and Solactive’s clients may not be able or have difficulties to trade relevant securities on certain markets.

Solactive indices may also be directly affected by stock suspensions or any other disruptions, as one or more of the index constituents may be prohibited from trading for a longer time, thereby impairing the representativeness of the index. In order to maintain the quality of its index methodologies and to clearly define how and when discretion may be exercised in the determination of an index, Solactive has decided to apply strict rules on how to deal with affected index constituents. Therefore Solactive aims at creating a generic framework of resilient rules which effectively govern such incidents, which further contributes to a highly rule-based methodology and protecting the integrity of Solactive’s indices.

2. LEADING PRINCIPLES

For the purpose of this policy, the concept of Market Stress is defined as any situation in which the trading of one or more given index constituents is interrupted for a given period of time. Solactive distinguishes two causes for such situations:

1) Suspension or Trading Halt of an individual index constituents

Solactive defines a trading halt as any situation in which the trading of an individual index constituents is intentionally halted for a given period of time. Such a halt or suspension may occur for a variety of reasons, depending on the jurisdiction, the stock exchange and the relevant security. It may be ordered by a supervisory authority based on its statutory powers (e.g. the SEC orders a trading suspension according to Section 12(k) of the Securities Exchange Act 1934 or the German Bafin based on § 25 of the Stock Exchange Act) or it may be carried out by the exchanges themselves, with their applicable rules usually being set out in their individual stock exchange rules.

2) Unplanned Market Closure

A Market Closure, in contrast, does not affect only a single index constituents but the whole market as such. Market Closures can be further divided into Planned and Unplanned Market Closures, while the former refers mainly to public holidays and the latter may occur due to a variety of reasons including:

- a systems failure;
- natural or man-made disaster;
- armed conflict;
- act of terrorism;
- riot or labor disruption;
- or any similar intervening circumstances.

With respect to the maintenance and calculation of its indices, Solactive sets out different treatments for Unplanned Market Closures without regard for their underlying reasons. Any Planned Market Schedules do not fall within the scope of this policy; their respective treatment, if any, is defined at the level of the individual indices in their relevant guidelines.

3) Disruption of the provision of indices

Insofar as other indices are constituents of Solactive indices, any disruption to their provision and distribution may negatively affect the calculation of Solactive indices. This is especially the case for third-party indices and benchmarks which are beyond the control and supervision of Solactive.

3. TREATMENT

1. Trading Halt or Suspension

If the trading or provision of an index constituent is disrupted, it generally remains in the index at its last trading price until further notice. Solactive does not distinguish between voluntary or regulatory suspensions nor does it take the underlying reasons into account. In order to minimize the effect of discretionary decisions on the index, Solactive monitors the affected constituent and indiscriminately decides to remove it from the index at the close of business after 20 consecutive business days during which the constituent has not been traded. Any external ratings, evaluations or other information are not taken into account. The constituent is removed at a value of 0.000000001.

The exact timing of the removal may vary, depending on the ordinary rebalancing schedule of the index:

- a) In case the affected index rebalances at least quarterly, i.e. the next rebalancing takes place in latest three months, the suspended constituent preliminarily in the index until then and is removed as part of the upcoming ordinary rebalancing if it has not resumed trading until then. The removal is notified within the course of the ordinary rebalancing.
- b) In case the affected index is a static index or rebalances less than four times a year, the index constituent is removed in an extraordinary rebalancing within two days after the decision for removal is taken if it has not resumed trading until then.

This extraordinary rebalancing is carried out as follows:

- i) The decision to remove the affected constituent is taken after the security has not been traded for 20 consecutive days.

ii) The extraordinary rebalancing is announced at the end of the day on which the decision was taken.

iii) The decision becomes effective on the second day after the announcement and the index constituent is removed from the index.

For clarification: The decision to remove the constituent from the index is always taken after 20 trading days, while only the implementation of the decision varies. Should an index constituent which has been removed from an index, as laid out under a) and b) above, resume trading at any given point in time after its removal, it may be eligible for a renewed inclusion to an index depending on the selection criteria set out in its respective methodology.

2. Trading Halt or Suspension on the effective date of Corporate Actions

If the trading of an index constituent is interrupted on the day before the effective date of a Corporate Action, the implementation of the Corporate Action is moved to the next day on which i) the index is calculated and ii) the affected constituent is again traded. A deviation from this procedure for individual indices is possible if this is clearly designated and set out in the respective documents.

3. Trading Halt or Suspension during an index rebalancing

If the trading of an index constituent is interrupted during an Index Rebalancing, the relevant constituent remains initially unaffected by the index rebalancing, i.e. its position is fixed. Should the constituent not commence trading within 20 consecutive business days, the procedure under 3.1 above applies.

4. Trading Halt or Suspension between selection and rebalancing Day

If the trading of a potential index constituent is interrupted between the Selection Day and the rebalancing day, the affected constituent is removed from the Index and its weight is distributed among the other index constituents pro rata.

5. Unplanned Market Closure

In case the trading on a market, at which constituents of a given Index are listed, is closed completely, this may affect Solactive's indices even more substantially.

A) If a market, on which a constituent to a given index is traded, is affected by an Unplanned Market Closure, the index constituents generally remain in the Index at their last trading price until further notice. In order to minimize the effect of discretionary decisions on the index, Solactive monitors the affected constituents and indiscriminately decides to remove them from the index at the close of business after 20 consecutive business days during which the constituents have not been traded - save for the exception under B) below, i.e. with all or a high percentage of constituents being affected. Any external ratings, evaluations or other information are not taken into account. The index constituents are removed at value of 0.0000000001.

The exact timing of the removal may vary, depending on the ordinary rebalancing schedule of the index:

a) In case the affected index rebalances at least quarterly, i.e. the next rebalancing takes place in latest three months, the suspended constituents preliminarily remain in the index until then and are removed as part of the upcoming ordinary rebalancing if it has not resumed trading until then. The removal is notified within the course of the ordinary rebalancing.

b) In case the affected index rebalances less than four times a year, the index constituents are removed in an extraordinary rebalancing within two days after the decision for removal is taken if it has not resumed trading until then.

This extraordinary rebalancing is carried out as follows:

i) The decision to remove the affected constituents is taken after the securities have not been traded for 20 consecutive days.

ii) The extraordinary rebalancing is announced at the end of the day on which the decision was taken.

iii) The decision becomes effective on the second day after the announcement and the index constituents are removed from the index. For clarification: Should an Unplanned Market Closure, which has led to securities being removed as laid out under a) and b) above, come to an end and the respective securities resume trading, these securities may be eligible for a renewed inclusion to an index depending on the selection criteria set out in their relevant methodologies.

B) In case of an Unplanned Market Closure lasting at least 60 consecutive business days and affecting all or a high percentage of the constituents of an Index, it may be necessary to deviate from the procedure under A) above to safeguard the integrity of the affected Index. Solactive may at its own discretion decide on appropriate measures on a case-by-case basis. A high percentage of constituents are deemed to be affected if the cumulative weight of the affected constituents is equal to or higher than 10% of the index total. In calculating the weights of the affected indices, the end-of-day values two days prior to the decision day are used as a basis.

6. Unplanned Market Closure on the effective date of a Corporate Action

If the trading of an index constituent is interrupted on the day before the effective date of a Corporate Action, the implementation of the Corporate Action is moved to the next day on which i) the index is calculated and ii) the affected constituent is again traded. A deviation from this procedure for individual indices is possible if this is clearly designated and set out in the respective documents.

7. Unplanned Market Closure during an Index Rebalancing

a) In case of an Unplanned Market Closure during an Index Rebalancing affecting one or more, but not all, constituents of an Index, the Rebalancing is generally carried out normally, but the relevant securities remain initially unaffected by the Index Rebalancing, i.e. their position is fixed. Should the Market Closure persist for 20 consecutive business days or longer, the procedure under 3.1 above applies.

b) In case of an Unplanned Market Closure during an Index Rebalancing affecting all constituents of an Index, the Rebalancing is moved to the subsequent day at which all relevant Markets are open and the affected constituents are traded again.

8. Extraordinary and Unforeseeable Events

In case of extraordinary and unforeseeable events which are not covered by the present Policy and lead to situations in which an analogous application of the above treatments would lead to obviously and grossly adversary effects on the affected index, Solactive may exceptionally deviate from the arrangements contained in this policy. Such cases shall be escalated to the Oversight Committee which shall deliberate and independently decide in line with the Solactive Guidelines on the Exercise of Expert Judgement on an appropriate alternative treatment. Any such alternative treatment deviating from the standard arrangements will be communicated clearly in advance. The Oversight Committee may also decide whether to deviate from the standard treatment contained in section 3.1 if the affected constituent is a benchmark index which is not being calculated or distributed.

4. TRANSPARENCY

Solactive will communicate and announce the respective incident and the measures taken by it in a timely manner, and provide the necessary details and updates.

Solactive shall announce any changes in a timely manner and shall seek to provide for an implementation period which provides sufficient time for adjusting accordingly.

As every decision which Solactive may take due to a market disruption may contain a discretionary element, it has to observe and comply with the *Solactive Guidelines relating to the exercise of Expert Judgment or discretion*. All decisions by Solactive are duly recorded.

5. ACCOUNTABILITY

This policy shall be reviewed regularly and updated accordingly.