

DISRUPTION POLICY

Public

Version 1.0

04 April 2019



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1. PURPOSE

This policy sets out the rules and procedures Solactive will apply during conditions of Market Stress occurring in the calculation process of Indices administered by Solactive.

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 to trade or have difficulties trading relevant securities on certain markets.

Solactive Indices may also be directly affected by suspensions or 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, Solactive has decided to apply strict rules on how to deal with affected Index constituents. Accordingly, Solactive aims at creating a generic framework of resilient rules that effectively govern such incidents, which further contributes to a highly rule-based methodology and to protecting the integrity of Solactive Indices.

2. SCOPE

This policy applies globally to all Indices administered by Solactive.

3. GENERAL PRINCIPLES

Solactive distinguishes between suspension or trading halt (see 3.1) and unplanned market closure (see 3.2) in its attention to the reasons for Market Stress.

3.1. SUSPENSION OR TRADING HALT OF AN INDIVIDUAL INDEX CONSTITUENT

Solactive defines a 'Trading Halt' as any situation in which the trading of an individual Index constituent is intentionally halted or the Index constituent is suspended from trading for a period of time. Such a Trading Halt 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 management of an exchange (e.g. in accordance with Section 25 of the German Stock Exchange Act (*Börsengesetz*), or in accordance with their individual stock exchange rules).

3.2. UNPLANNED MARKET CLOSURE

A 'Market Closure', in contrast, affects not only a single Index constituent but the whole market or segments of the market. Market Closures can be further divided into planned and unplanned Market Closures. The former refers mainly to days on which the relevant exchange is not open for trading as scheduled, while the latter may occur unplanned due to a variety of reasons, inter alia, including:

- a systems failure;



- a natural or man-made disaster;
- armed conflict;
- an act of terrorism;
- a 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 taking their reasons into account. Any planned Market Closures 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 Index guidelines.

3.3. 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 provision and calculation of Solactive Indices. This is especially the case for third-party indices and benchmarks that are beyond the control of Solactive.

4. TREATMENT

4.1. TRADING HALT OR SUSPENSION

If an Index constituent is affected by a Trading Halt, it generally remains in the Index at its last observed trading price until further notice. Solactive does not distinguish between voluntary and regulatory Trading Halts, nor does it take the reason for a Trading Halt into account. Solactive monitors the affected Index constituent and removes it from the Index if the Trading Halt has lasted for 20¹ consecutive Trading Days. Any external ratings, evaluations or other information are not taken into account. The affected Index constituent is removed at a value of 0.0000000001 expressed in the trading currency of the respective constituent.

The exact timing of the removal may vary, depending on the ordinary rebalance schedule of the Index:

- a) In the case the affected Index rebalances at least quarterly (i.e. the next rebalance takes place in at latest three months), the constituent affected by the Trading Halt remains temporarily in the Index until the scheduled rebalance and is then removed as part of the ordinary rebalance process, provided that it has not resumed trading by then. The removal is notified within the course of the ordinary rebalance.
- b) In the case the affected Index is static or rebalances less than four times a year, the Index constituent is removed in an extraordinary rebalance within two full Trading Days after the decision for removal is announced if it has not resumed trading by the time the removal takes effect.

¹ For locally listed Chinese Instruments, an extended period of 60 consecutive non-Trading Days will be considered.



This extraordinary rebalance is carried out as follows:

- i) The decision to remove the affected constituent can be made only if the Index has been affected by a Trading Halt for 20 consecutive Trading Days.
- ii) The extraordinary rebalance is announced at the end of the day on which the decision was taken.
- iii) The decision becomes effective after close of business on the second Trading Day after the announcement, and the Index constituent is removed from the Index.

For clarification: the decision to remove an Index constituent from the Index is always taken if the Index constituent has been affected by a Trading Halt for 20 consecutive Trading Days, while only the time of implementation of the decision varies. Should an Index constituent that has been removed from an Index, as laid out under a) and b) above, resume trading after its removal, it may be eligible for re-inclusion to an Index depending on the selection criteria set out in the respective Index guideline.

4.2. TRADING HALT OR SUSPENSION ON THE EFFECTIVE DATE OF CORPORATE ACTIONS

If an Index constituent is affected by a Trading Halt 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 Index constituent is traded.

Deviation from this procedure for individual Indices is possible if this is clearly designated and set out in the respective Index guideline.

4.3. TRADING HALT OR SUSPENSION ON A REBALANCE DAY

If an Index constituent is affected by a Trading Halt on a Rebalance Day, the relevant constituent remains initially unaffected by the Index rebalance (i.e. its position is fixed). Should the constituent not commence trading within 20 consecutive Trading Days, the procedure under 3.1 above applies.

4.4. TRADING HALT OR SUSPENSION BETWEEN SELECTION AND REBALANCE DAY

If a potential Index constituent is affected by a Trading Halt between the Selection Day and the Index Rebalance Day, the affected Index constituent is removed from the Index and its weight is distributed among the remaining Index constituents on a pro rata basis.

4.5. UNPLANNED MARKET CLOSURE

- A. The complete closure of a trading venue at which constituents of a given Index are listed may affect Solactive's Indices even more substantially.



If a trading venue on which an Index constituent is traded is affected by an unplanned Market Closure, the Index constituent generally remains in the Index at its last observed trading price until further notice. Solactive monitors the affected Index constituent and removes it from the Index if the unplanned Market Closure has lasted for 20² consecutive Trading Days - save for the exception under B. below. Any external ratings, evaluations or other information are not taken into account. The affected Index constituent is removed at value of 0.0000000001 expressed in the trading currency of the respective constituent.

The exact timing of the removal may vary, depending on the ordinary rebalance schedule of the Index:

- a) In the case the affected Index rebalances at least quarterly (i.e. the next rebalance takes place in at latest three months), the constituents affected by the unplanned Market Closure remain temporarily in the Index until the scheduled rebalance and are then removed as part of the ordinary rebalance process, provided that they have not resumed trading by then. The removal is notified within the course of the ordinary rebalance.
- b) In the case the affected Index is static or rebalances less than four times a year, the Index constituent is removed in an extraordinary rebalance within two Trading Days after the decision for removal is announced if it has not resumed trading by the time the removal takes effect.

This extraordinary rebalance is carried out as follows:

- i) The decision to remove the affected constituents can be made only if the Index has been affected by an unplanned Market Closure for 20 consecutive Trading Days.
- ii) The extraordinary rebalance is announced at the end of the day on which the decision was taken.
- iii) The decision becomes effective after close of business on the second Trading Day after the announcement, and the Index constituent is removed from the Index. For clarification: Should an unplanned Market Closure that has led to an Index constituent being removed (as laid out under a) and b) above) cease, and the respective Index constituent resumes trading, the Index constituent may be eligible for re-inclusion to an Index depending on the selection criteria set out in the respective Index guideline.

- B. In the case of an unplanned Market Closure lasting for at least 60 consecutive Trading Days and affecting all or a significant percentage of the Index constituents, 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.

² For locally listed Chinese Instruments, an extended period of 60 consecutive non-Trading Days will be considered.



4.6. UNPLANNED MARKET CLOSURE ON THE EFFECTIVE DATE OF A CORPORATE ACTION

If an Index constituent is affected by an unplanned Market Closure 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 Index constituent is traded.

Deviation from this procedure for individual Indices is possible if this is clearly designated and set out in the respective Index guideline.

4.7. UNPLANNED MARKET CLOSURE ON A REBALANCE DAY

- A. If one or more, but not all, Index constituents are affected by an unplanned Market Closure on a Rebalance Day, the rebalance is generally carried out normally, but the affected Index constituents remain initially unaffected by the Index rebalance (i.e. their position is fixed). Should the unplanned Market Closure persist for 20 consecutive Trading Days or longer, the procedure under 3.1 above applies.
- B. If all Index constituents are affected by an unplanned Market Closure on a Rebalance Day, the Rebalance Day is moved to the subsequent Trading Day on which all relevant markets are open for trading with respect to the affected Index constituents.

4.8. EXCEPTIONS

Due to the ability of Chinese companies to suspend trading in their own shares and the resulting increased frequency and duration of trading suspensions in the Chinese market in comparison to other markets, the above-described 20 non-Trading Day period that triggers a disruption event will be extended to 60 non-Trading Days for all Chinese instruments listed on either the Shanghai Stock Exchange, Shenzhen Stock Exchange or traded through the Stock Connect facility.

4.9. EXTRAORDINARY AND UNFORESEEABLE EVENTS

In the case of extraordinary and unforeseeable events that are not covered by the present policy and that lead to situations in which an analogous application of the above treatments would lead to obvious and severe adverse effects on the affected Index, Solactive may deviate from the arrangements contained in this policy. Such cases will be escalated to the Oversight Committee, which will independently decide on an appropriate alternative treatment. Any such alternative treatment deviating from the standard arrangements will be communicated clearly and with sufficient time before it becomes effective.

5. TRANSPARENCY

Solactive will communicate and announce the respective event 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 that provides sufficient time for potential adjustments that users of the index may need to take to account for the change.

All decisions by Solactive are to be duly recorded.

6. DEFINITIONS

For the purpose of this document, the defined terms used herein shall have the following meanings:

'BMR' means Regulation (EU) 2016/1011 of the European Parliament and of the Council of 8 June 2016 on Indices used as benchmarks in financial instruments and financial contracts or to measure the performance of investment funds and amending Directives 2008/48/EC and 2014/17/EU and Regulation (EU) No 596/2014.

'Corporate Action' means an event that results in an adjustment to the Index between two scheduled Rebalance Days. Such events have a material impact on the price, weighting or overall integrity of Index components.

'Index' (or 'Indices') refers to an index as defined in Article 3(1)(1) of the BMR.

'Rebalance Day' means the rebalance day specified in the relevant Index guideline.

'Market Closure' is defined in section 3.2.

'Market Stress' refers to any situation in which the trading of one or more Index constituents is interrupted for a period of time.

'Oversight Committee' means a committee composed of staff from Solactive and its subsidiaries that is responsible for decisions regarding any amendments to the rules or any termination of the Index.

'Selection Day' means the selection day specified in the relevant Index guideline.

'Solactive' means Solactive AG and its subsidiaries.

'Trading Day' means any day on which the affected Index and/or the Index constituents are regularly traded (i.e. excluding any scheduled holidays or days on which trading has been disrupted for other reasons).

'Trading Halt' is defined in section 3.1.

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