

METHODOLOGY FOR VALUATION OF SUSPENDED SHARES USING FUTURES

Methodology

In case of the need to remove one or more suspended securities from a STOXX index, that has listed Futures contracts based on it, STOXX will proceed as follows:

First, STOXX will determine the valuation of all suspended securities at the close of day t in the index by performing the following steps:

- 1) Determine the value of the index excluding the suspended securities (E). For this the regular index formula and valid parameters on day t will be used and prices for the suspended securities will be set to zero.
- 2) Determine the current fair value of the index as implied by valuations of the current first quarterly Futures contract. In case t is less than two trading days prior to the expiry of this front quarter Futures contract the next available quarterly Futures contract shall be used. The fair value will be determined as follows:

$$S = \frac{F + FVD}{\left(1 + \frac{r}{360}\right)^{DtE}}$$

where:

Variable	Description	Source
S	Fair valuation of the index	
F	Volume weighted average price between 17:25 CET and 17:30 CET on t of Index Futures contract as traded on Eurex	Eurex
FVD	Future Value of the Dividend Points till Futures Expiry for the Index basket between t and expiry	Bloomberg
r	Time-weighted Interpolation of EURIBOR 2M and EURIBOR 3M rates	Bloomberg
DtE	Days to Expiry	Eurex

- 3) Determine the implied value of the suspended securities (X), where $X = S - E$
- 4) Calculate the valuation of the suspended securities using their current index parameters on day t based on last available closing prices (L).
- 5) Calculate the mark down ratio of the securities (M), where $M = X / L$
- 6) Apply the mark down ratio equally to the last available prices (p) of each suspended security to determine the exclusion price (e) as follows: $e = p * M$.

The suspended securities will then be removed effective t+1 using exclusion prices e as determined above.

METHODOLOGY FOR VALUATION OF SUSPENDED SHARES USING FUTURES

Procedure

In case STOXX announces the removal of suspended securities from its indices with Futures contracts such announcement will be done 2 days prior to the exclusion after the close on day $t-2$. All data used for the calculations will be taken as close/settlement values of day t . After the close on day t , the adjustments will be implemented and hence be effective of $t+1$.