INDEX RULE BOOK Euronext® Single Stock Leverage and Short Indices

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1. GENERAL

This document is applicable to the Euronext Single Stock Leverage and Short Indices ("Index Family"), which consists of all the Indices as mentioned in the Reference Table. The Index Family is designed to reflect the price level trends in the trading of shares listed in global markets with a tracks the performance of a strategy that has a multiple (K) exposure to an underlying stock with the support of short-term financing. The Short or Bear index tracks the performance of a strategy which reverses a multiple (K) exposure to the underlying stock by combining a short position on the underlying stock and exposure to a risk-free money-market instrument. The latter exposure consists of the money invested in the index plus the multiple (K) short positions.

Euronext Amsterdam is the Administrator of this Index Family. For this Index Family no Independent Supervisor is appointed.

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Version	Effective date	New or changed parts	Reference/announcement
24-01	20-09-2024	First Version	

VERSION NOTES

2. DEFINITION AND CALCULATION

2.1 DEFINITION AND COMPOSITION OF THE INDEX

The Leverage index tracks the performance of a strategy that has a multiple (K) exposure to an underlying stock with the support of short-term financing.

The Short or Bear index tracks the performance of a strategy which reverses a multiple (K) exposure to the underlying stock by combining a short position on the underlying stock and exposure to a risk-free money-market instrument. The latter exposure consists of the money invested in the index plus the multiple (K) short positions.

2.2 CALCULATION OF THE LEVERAGE INDICES

The general formula of the Leverage indices is defined as follows:

$$\begin{split} & LI_{t} = LI_{T} \Bigg[1 + K \Bigg(\frac{UI_{t}}{UI_{T}} - 1 \Bigg) \Bigg] - (K - 1) LI_{T} \Bigg[\frac{IR_{T}}{360} \Bigg] D_{t,T} - a(K - 1) \times LI_{T} \Bigg[\frac{SPR_{T}}{360} \Bigg] D_{t,T} \\ & \text{Where:} \\ T & = \text{Rebalancing date; for daily indices this is the previous business day.} \\ & LI_{t} & = \text{Leverage index level at time of calculation t} \\ & LI_{T} & = \text{Closing Leverage index level on the previous calculation day} \\ & UI_{t} & = \text{Underlying Stock level (see Index summary) at time of calculation t} \\ & UI_{T} & = \text{Closing Underlying Stock level on the last rebalancing day T} \\ & IR_{T} & = \text{Applicable interest rate as at the rebalancing date T.} \\ & D_{t,T} & = \text{the number of days between the day of the calculation and T, the rebalancing} \\ & \text{SPRT} & = \text{Applicable interest rate spread over the IR_{T}} \\ & a & = \text{Applicable factor to apply spread over IR if not applied, a=0} \\ & \text{K} & = \text{Leverage factor} \end{aligned}$$

day

2.3 CALCULATION OF THE BEAR AND SHORT INDICES

The general formula of the Short indexes is defined as follows:

$$BI_{t} = BI_{T} \left[1 - K \left(\frac{UI_{t}}{UI_{T}} - 1 \right) \right] + (K+1)BI_{T} \left[\frac{IR_{T}}{360} \right] D_{t,T} - K.a.BI_{T} \left[\frac{FIN_{T}}{360} \right] D_{t,T}$$

- =Rebalancing date; for daily indices this is the previous business day.
- T BI_{t}
- = Short or Bear index level at time of calculation t
- BI_T = Closing Short index level on the previous calculation day
- UI_t = Underlying Stock level (see Index summary) at time of calculation t
- UI_T = Closing Underlying Stock level on the previous calculation day
- $D_{t,T}$ = the number of days between the day of the calculation and T, the rebalancing day
- IR_T = Applicable interest rate as at the rebalancing date T.

- FIN_T = Financing Adjustment rate (Repo). The rate reflecting the cost specifically associated with the strategy. The rate may be different for some underlying stocks or may not be applied for specific stocks.
- a = Applicable factor to apply FIN. If FIN rate is not applied a=0.
- K = Short factor

2.4 INTEREST AND REPO RATE

The reference table in chapter 4 shows the applicable Repo rate and Spread rate for each of the Indices in the Index Family. The Index Administrator will review the rates on a monthly basis in the week of the third Friday of each month. If there is an update of the rates it is announced two trading days before the third Friday and the rates become effective as of the next Monday after the third Friday of the month.

2.5 REVERSE SPLIT OF THE INDEX LEVEL

If an index has dropped below 10 it may qualify for a reverse split. For the reverse split a ratio of 1000 is applied.

Periodical Review

Indices are reviewed each month on the first Friday. If an index level has reached a closing level below 10

on the previous day, the index level will be adjusted 2 weeks later by a reverse split.

Implementation of reverse split

After close of business on the 3rd Friday of the month, the closing level will be multiplied by 1,000 (one thousand). In case the Friday is not a trading day, the review or implementation will be on the day before.

2.6 WHEN WILL INDICES CEASE TO EXIST

The index will cease to exist when a particular corporate action will give rise to this, this is further discussed in Chapter 4 Specific Corporate Action Treatments. In case the index will cease to exist, this will be announced via the usual channels. The announcement policy is described in the Euronext Indices Announcement policy document that is available on indices.euronext.com/index-rules.

The decision to cease the Index belongs to the Administrator.

3. EXCEPTIONAL MARKET CONDITIONS AND CORRECTIONS

3.1 EXTREME MARKET MOVEMENTS

In case the level of the underlying Stock rises or falls more than a predefined percentage relative to the close of the previous trading day, the index will be either suspended or reset (see index summary).

3.2 PROCEDURE FOR RESET OF DAILY LEVERAGED/SHORT INDICES

In case the level of the underlying STock rises or falls by more than a predefined percentage relative to its close of the previous trading day, the Leverage or Short Index will be reset. If an index is **reset**, the index will be adjusted intraday:

- For leverage calculations only downtrend movements will trigger a reset
- For short calculations only uptrend movements will trigger the reset.

Numerically, the intraday reset condition is defined as follows (with $\alpha > 0$):

$$\frac{UI_t}{UI_T} < \alpha\%$$
 (C1-L) for Leverage indices

Or

 $\frac{UI_t}{UI_T} > \alpha\%$ (C1-S) for Short/Bear indices

Where:

- *UI*, is the real-time price of the index at time of calculation time t;
- UI_T is the official closing level of the index on the previous rebalance day;
- α % = as per the Index Summary section above under the column "Rule in case of extreme market movements".

For Leverage indices, if condition (C1-L) is met at calculation time t:

- The calculation of the index is suspended temporarily (i.e. the level that was published just before the condition is met will keep on being published).
- The prices of the Underlying Stock are observed during 5 full minutes.
- The **minimum price** of the Underlying Stock during the 5-minute observation period is used to reset the Leverage Index.

For Short/Bear indices, if condition (C1-S) is met at calculation time t:

- The calculation of the index is suspended temporarily (i.e. the level that was published just before the condition is met will keep on being published).
- The prices of the Underlying Stock are observed during 5 full minutes.
- The **highest price** of the Underlying Stock during the 5-minute observation period is used to reset the Leverage Index.

Once the observation period is over the calculation of the index is resumed as per the formula below:

$$LI_{t} = LI_{R1} \left[1 + K \left(\frac{UI_{t}}{UI_{R1L}} - 1 \right) \right]$$
$$SI_{t} = SI_{R1} \left[1 - K \left(\frac{UI_{t}}{UI_{R1H}} - 1 \right) \right]$$

Or

$$SI_t = SI_{R1} \left[1 - K \right] \left[\frac{U}{UI_t} \right]$$

Where:

 $UI_{\rm R1L}$ is the lowest recorded index level over an observation period of 5 minutes following calculation time t (time when the threshold was crossed);

 $L\!I_{\rm R1}$ is the level of the index using index level ${}^{U\!I}_{\rm R1L}$; ON_T : is the Overnight rate:

$$LI_{R1} = LI_{T-1} \left\{ 1 + K \left[\frac{UI_{R1L}}{UI_T} - 1 \right] - (K-1) * \left[\frac{ON_T}{360} \right] * D_{T,T-1} - (K-1) * \left[\frac{SPR_T}{360} \right] * D_{T,T-1} \right\}$$

 UI_{R1H} is the highest recorded index level over an observation period of 5 minutes following calculation time t (time when the threshold was crossed);

 SI_{R1} is the level of the index using index level UI_{R1H} :

$$SI_{R1} = SI_{T-1} \left\{ 1 - K \left[\frac{UI_{R1H}}{UI_T} - 1 \right] + (K+1) * \left[\frac{ON_T}{360} \right] * D_{T,T-1} - K * \left[\frac{FIN_T}{360} \right] * D_{T,T-1} \right\}$$

Note that no additional refinancing costs are calculated after an intraday reset occurs.

An intraday reset may occur more than once during the same scheduled calculation date. After a first intraday reset occurs, the condition becomes the following:

$$\frac{UI_{t}}{UI_{R1L}} < \alpha\%$$
(C2-L) for Leverage indices

Or

$$\frac{UI_{t}}{UI_{R1H}} > \alpha\%$$
(C2-S) for Short/Bear indices

Where:

 UI_{i} is the index level used at time of calculation t; $UI_{\rm R1L}$ as defined above; UI_{R1H} as defined above; $\alpha\%$ as defined above.

If the above condition (C2) is met, another intraday reset is triggered. The calculation in realtime resumes as follows:

$$LI_{t} = LI_{R2} \left[1 + K \left(\frac{UI_{t}}{UI_{R2L}} - 1 \right) \right]$$

Or

$$SI_t = SI_{R2} \left[1 - K \left(\frac{UI_t}{UI_{R2H}} - 1 \right) \right]$$

Where:

 UI_{R2L} is the lowest recorded index level over an observation period of 5 minutes following calculation time t (time when condition (C2-L) is met).

$$LI_{R2} = LI_{R1} \left[1 + K \left(\frac{UI_{R2L}}{UI_{R1L}} - 1 \right) \right]$$

 UI_{R2H} is the lowest recorded index level over an observation period of 5 minutes following calculation time t (time when condition (C2-S) is met).

$$SI_{R2} = SI_{R1} \left[1 - K \left(\frac{UI_{R2H}}{UI_{R1H}} - 1 \right) \right]$$

The same procedure is followed for any other intraday reset following another crossing of the predefined threshold.

The closing level of the index will be calculated in accordance with the last parameters defined for the last reset event as described above.

In case $LI_{R1} <= 0$ or $SI_{R1} <= 0$, the index level will be fixed at 0.001. This index level will continue to be broadcasted for 4 weeks after the reset occurred. Subsequently the index will be discontinued.

4.1 **REFERENCE TABLE**

Mnemo	Full name	Underlying Stock	Factor	Rule for exceptional trading circumstances	ISIN	Base level and date	Interest rate	Repo Rate/Spread Rate
E3XLM	Euronext Microstrategy 3 leverage	Microstrategy	3	Reset if Underlying Stock < 75% of close of previous day	FRIX00003239	TBC	EFFR	30 BPS
E3XSM	Euronext Microstrategy 3 Short	Microstrategy	3	Reset if Underlying Stock > 75% of close of previous day	FRIX00003247	TBC	EFFR	1.43%

4.2 BASE CURRENCY

The Base Currency of this index family is USD.

4.3 PUBLICATION

The level of the Index is calculated and published on the days when the Euronext Markets are open for trading, using the latest published price or the latest published official closing price, as applicable, of each stock on its relevant market. In the case of stocks that have either not traded or are halted/suspended, the previous day's references prices or estimated prices (for IPOs, buyouts and swap offers) shall be utilized.

The level of the index is published once a day shortly after the closing of the relevant market.

5. SPECIFIC CORPORATE ACTION TREATMENT

Corporate actions will lead to the determination of an adjusted closing price of the Stock on the previous Exchange Business Day for the purposes of the calculation of the Index on Calculation Date T. The adjusted price reflects the impact of the corporate event on the official closing price of the Stock on the Exchange Business Day preceding the Exchange Business on which such corporate event is effective. Adjustments will be made for the following Corporate Actions:

5.1: DIVIDENDS

Dividends will lead to an adjustment of the closing price of the stock on the previous Business Day by subtracting the dividend amount from the closing price.

5.1 STOCK SPLITS AND REVERSE STOCK SPLITS

For bonus issues, stock splits and reverse stock splits, the closing price will be adjusted in accordance with the ratio given in the corporate action.

5.2 **RIGHTS ISSUES**

In the event of a rights issue the closing price will be adjusted based on the value of the right.

The Indices will only be adjusted if the rights represent a positive value.

Other Rights

The index will also be adjusted if a value can be attributed to a subscription right for convertible bonds, bonds with warrants or warrants with preferential rights for shareholders or similar situations.

If the value cannot be attributed straightforward, the Administrator may also decide to include the detached instrument for one day and adjust the index at the close based on the closing price for that instrument on that day.

4.3 PARTIAL TENDER OFFERS ON OWN SHARES

The closing price will be adjusted if the premium represents more than 5% of the share price of the close on the penultimate trading day before the ex-date (the day prior to the last day before the ex-day). The premium is calculated as the difference between the offered price and the closing price, multiplied by the percentage of the share capital targeted in the offer.

An adjusted close is calculated for the Company in line with the terms of the tender offer.

4.4 SPLIT UP / SPIN OFF

In the event that a company included in the index is split up, the companies resulting from the split, including the original company where appropriate will continue to be included in the index for one day. The Company that was spun-off will be removed from the Index after the close of the first day of trading in the shares of that company.

For the purposes of these rules a split up is taken to mean a legal demerger, a spin-off or another situation which Index Design deems to be similar. The distribution by an index constituent of shares in a company which is already listed is in principle treated as a spin off unless the distribution takes place in lieu of an ordinary dividend. In case the shareholder of the company which was originally included in the index does not automatically receive shares in a company which is created as a result of the split up, this company is considered to be a newly listed company and not a spin off.

4.4 MERGERS AND ACQUISITIONS

Acquisitions in cash

In the event of a bid in cash, the Index remains in place without any adjustments. Euronext will continue calculating the Index.

Mergers and takeovers in shares

In the event of a merger, acquisition or similar situation where the bid is made in the form of shares, the Company will be replaced by the newly formed company, provided the newly formed company is trading in the same currency. The replacement will take place in line with the schedule of the transaction. The replacement of the newly formed company will be executed on the basis of the bid ratio. In case the newly formed company is trading in a different currency , the Index will cease to exist. This will take place in line with the schedule of the transaction.

Mixed transactions

In case a of a mixed bid of cash and shares the bid will be treated as merger in shares if the share part amounts to at least 75% of the offer price, on the day of the publication of the terms of the offer. The replacement of the shares of the relevant index constituent by the shares of the company that continues to be traded will be executed on the basis of the bid ratio. The divisor will be adapted only for the cash part of the offer price.

Specific treatments

Index Design reserves the right to apply a specific treatment in non-standard situations including but not limited to:

- Competing bids with differing closing dates or structures;
- Offers made without the intention to gain full control.

In case of a specific treatment a separate announcement detailing the specific treatment will be issued timely to the market.

4.5 SUSPENSION, DELISTING AND LEVEL DROPPING BELOW 0

Suspension

In the event that the trading in shares is suspended, the last known price established during regular daytime trading will be used for the calculation of the index.

If a Company is suspended, Index Design will consider whether the Index should be ceased or not within five trading days. If it is decided to maintain the Index a further reassessment date will be set. Index Design reserves the right to take action before that date if new developments give reason to do so.

In case the Index will cease to exist, it will be done on a day determined and announced in advance by Index Design Committee.

Delisting

If it has been officially announced that a constituent will be delisted from the relevant market, the Index will cease to exist after the close of the fifth (full) business day after the

announcement. In case of short time notice Index Design may determine an earlier date for stopping of the Index. When the index will cease to exist, the closing level of that day is the last closing level of the index.

Index level dropping below 0

In case the level of the decrement version of the index will be below 0 at the end of the day, this Index level will be kept at 0.01. The Price, Gross and Net versions of the Index will be kept at that specific end of day closing level.

6. ESG DISCLOSURES

EXPLANATION OF HOW ESG FACTORS ARE REFLECTED IN THE KEY ELEMENTS OF THE BENCHMARK METHODOLOGY				
Item 1 . Name of the benchmark administrator.				
Item 2. Type of benchmark				
Item 3 . Name of the benchmark or family of benchmarks.				
Item 4 . Does the benchmark methodology for the benchmark or family of benchmarks take into account ESG factors?	Νο			
Item 5. If the response to Item 4 is positive, please find below the ESG factors that are taken into account in the benchmark methodology and how they are used for selection, weighting and exclusion				
a) List of environmental factors considered:	not applied			
b) List of social factors considered:	not applied			
c) List of governance factors considered:	not applied			
Item 6. Data and standards used.				
 a) Data input. (i) Describe whether the data are reported, modelled or, sourced internally or externally. (ii) Where the data are reported, modelled or sourced externally, please name the third party data provider. 	not applied			
b) Verification of data and guaranteeing the quality of those data. Describe how data are verified and how the quality of those data is ensured.	not applied			
c) Reference standards Describe the international standards used in the benchmark methodology.	not applied			
Information updated on:	September 2024			