INDEX GUIDELINE

HSBC US Enhanced Rolling Put

Version 1.4

30 September 2025

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INTRODUCTION

This document (the "**GUIDELINE**") is to be used as a guideline with regard to the composition, calculation and maintenance of the HSBC Enhanced Rolling Put (the "**INDEX**"). Any amendments to the rules made to the GUIDELINE are approved by the INDEX COMMITTEE specified in Section 5.5. The INDEX is owned by HSBC Bank plc ("**INDEX OWNER**"). The INDEX is calculated, administered and published by Solactive AG ("**SOLACTIVE**") assuming the role as administrator (the "**INDEX ADMINISTRATOR")** under the Regulation (EU) 2016/1011 (the "**BENCHMARK REGULATION**" or "**BMR**"). The name "Solactive" is trademarked.

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The text uses defined terms which are formatted with "SMALL CAPS". Such Terms shall have the meaning assigned to them as specified in Section 6 (Definitions).

1. INDEX SPECIFICATIONS

1.1. SCOPE OF THE INDEX

Category	Description
Asset Class	Equity
Strategy	The INDEX is a rules-based strategy which notionally enters into long listed Put option positions with strike solved for 15% delta, expiration dates nearest to 1-year, within its portfolio and notionally holds the position until the respective expiration date. When delta of any individual option in the portfolio reaches or exceeds 50%, this specific option is unwound the next day, and a new replacement option with 15% delta strike and same maturity as unwound one and same quantity is added to portfolio. When delta of any individual option in the portfolio falls at or below 5% and time-to-maturity of the respective option exceeds 21 business days and current underlying index closing level exceeds 110% multiplied by the underlying index closing level at the date when the respective option was traded, then this specific option is unwound the next day, and a new replacement option with 15% delta strike and same maturity as unwound one and same quantity is added to portfolio. The INDEX is calculated on a notional basis. The investment exposure provided by the INDEX to the options is purely synthetic and an investor in the INDEX will have no rights in respect of any of the options. For the avoidance of doubt, any reference herein to options being "entered into" is purely on a notional basis.
Regional Allocation	North America

Table 1 Index Overview

1.2. IDENTIFIERS AND PUBLICATION

The INDEX is published under the following identifiers

Name	ISIN	Index Currency	Type	BBG ticker	RIC
HSBC US Enhanced Rolling Put Index	DE000SL0L6R1	USD	Excess Return	HSIEERPI Index	.HSIEERPI
HSBC US Enhanced Rolling Put Indicative Index	DE000SL0RRZ9	USD	Excess Return	HSIOERPI Index	.HSIOERPI

The INDEX is published on the website of the INDEX ADMINISTRATOR (www.solactive.com) and is, in addition, available via the price marketing services of Boerse Stuttgart GmbH and may be distributed

to all of its affiliated vendors. Each vendor decides on an individual basis as to whether it will distribute or display the INDEX via its information systems.

Any publication in relation to the INDEX (e.g. notices, amendments to the GUIDELINE) will be available at the website of the INDEX ADMINISTRATOR: https://www.solactive.com/news/announcements/.

1.3. INITIAL LEVEL OF THE INDEX

The initial level of the INDEX on the START DATE is 100. Historical values from the LIVE DATE, will be recorded in accordance with Article 8 of the BMR. Levels of the INDEX published for a period prior to the LIVE DATE have been back-tested using EXCHANGE PRICES. Levels of the INDEX published for the period falling on or prior to Jan, 3rd 2023 have been provided by the INDEX OWNER to the INDEX ADMINISTRATOR. The INDEX OWNER has obtained the listed options available from REFINITIV and calculated the levels of the INDEX from the period of July, 2nd 2015 to Jan, 3rd 2023.

1.4. PRICES AND CALCULATION FREQUENCY

The level of the HSBC US ENHANCED ROLLING PUT INDEX is calculated in respect of each CALCULATION DAY t and is published at 09:00 a.m. CET on the CALCULATION DAY immediately following CALCULATION DAY t. The level of the HSBC US ENHANCED ROLLING PUT INDEX is calculated in respect of each CALCULATION DAY t and is published at 05:00 p.m. EST on the CALCULATION DAY.

1.5. LICENSING

Licenses to use the INDEX as the underlying value for financial instruments, investment funds and financial contracts may be issued to stock exchanges, banks, financial services providers and investment houses by the INDEX OWNER.

2. INDEX SELECTION

2.1. SELECTION OF THE INDEX COMPONENTS

- In respect to each CALCULATION DAY t – that is not a HALF TRADING DAY[1] – a set of listed options ("**OPTION Q_t**") is entered into the portfolio with the following properties:

	GUIDELINES NOTATION	**OPTION 1 FIELD VALUE**	**OPTION 2 FIELD VALUE**
OPTION	Q_t	$\mathrm{P1_t}$	$\mathrm{P2_t}$
OPTION TYPE	Type_Q	Put	Put
PURCHASED/SOLD		Purchased	Purchased
TRADE DATE	TR_Q	CALCULATION DAY t	
EXPIRATION DATE	TE_Q	$\mathrm{M1_t}$	$\mathrm{M2_t}$
UNWIND DATE	TU_Q	$\mathrm{M1_t}$	$\mathrm{M2_t}$
STRIKE PRICE	K_{Q_t}	$\mathrm{K1_t}$	$\mathrm{K2_t}$
FRICTION	f_Q	$\max(0.15\%, \min(0.50\%, 1\% \times \sigma_{t,K_Q,TE_Q}))$	

With:

TM_t: is the TARGET EXPIRATION DATE

$\mathrm{M1_t}$: is the furthest ELIGIBLE EXPIRATION DATE that is less than TM_t

$\mathrm{M2_t}$: is the shortest ELIGIBLE EXPIRATION DATE that is greater than or equal to TM_t

TU_Q: is the UNWIND DATE of OPTION Q

$\mathrm{Ki'_t}$: for each i from 1 to 2, is the TARGET STRIKE for OPTION Pi_t computed on CALCULATION DAY t-1, such that the DELTA for such option is equal to -15%

$\mathrm{Ki_t}$: for each i from 1 to 2, is the ELIGIBLE LISTED STRIKE for the EXPIRATION DATE Mi_t which is the closest to $\mathrm{Ki'_t}$

σ_{t,K_Q,TE_Q}: the IMPLIED VOLATILITY σ on CALCULATION DAY t in relation to STRIKE PRICE K_Q and EXPIRATION DATE TE_Q of OPTION Q

- In respect to each CALCULATION DAY t, or every OPTION Q in the portfolio for which TU_Q falls on the CALCULATION DAY t+1, a new OPTION Q' is entered into the portfolio on CALCULATION DAY t+1 with the following characteristics:

[1] Half Trading Day treatment is applied effective from 12 June 2025

- OPTION TYPE $\text{Type}_{Q'}$ of OPTION Q' is the OPTION TYPE Type_{Q} of OPTION Q
- TRADE DATE $\text{TR}_{Q'}$ of OPTION Q' is CALCULATION DAY t+1
- EXPIRATION DATE $TE_{Q'}$ of OPTION Q' is the EXPIRATION DATE TE_Q of OPTION Q
- UNWIND DATE $TU_{Q'}$ of OPTION Q' is the EXPIRATION DATE TE_Q of OPTION Q
- The NUMBER OF UNITS $Units_{Q'}$ of OPTION Q' is NUMBER OF UNITS $Units_Q$ of OPTION Q
- FRICTION f_Q,of OPTION Q' is the FRICTION f_Q of OPTION Q
- The STRIKE PRICE $K_{Q'}$ of OPTION Q' is the ELIGIBLE LISTED STRIKE for the EXPIRATION DATE $TE_{Q'}$, which is the closest to the TARGET STRIKE $TK_{Q'}$ of Option Q'
- The TARGET STRIKE $TK_{Q'}$ of OPTION Q' is the TARGET STRIKE of OPTION Q' calculated such that the BLACK SCHOLES DELTA for such option is equal to -15%

2.1.1. Unwind Date

In relation to CALCULATION DAY t, the UNWIND DATE TU_Q of OPTION Q is calculated according to the following formula:

$$TU_Q = \begin{cases} t+1^* \; if \; \left(Delta_{t,Q} \leq -50\% \; and \; TE_Q > t+1\right) \\ t+1^* \; if \; \left(Delta_{t,Q} \geq -5\% \; and \; UI_t > UI_{TR_Q} \times 110\% \; and \; DC_{t,TE_Q} > 21\right) \\ TE_Q \; otherwise \end{cases}$$

With:

$t+1^*$: means the CALCULATION DAY immediately following CALCULATION DAY t. If such CALCULATION DAY is a HALF TRADING DAY, then $t+1^*$is set to the CALCULATION DAY immediately following the HALF TRADING DAY

$t+1$: means the CALCULATION DAY immediately following CALCULATION DAY t

$Delta_{t,Q}$: is the DELTA of OPTION Q as of CALCULATION DAY t

TE_Q: is the EXPIRATION DATE of OPTION Q

TR_Q: is the TRADE DATE of OPTION Q

$DC_{t,t'}$: means the number of CALCULATION DAYS in the period commencing on (and including) CALCULATION DAY t and ending on (but excluding) CALCULATION DAY t'

UI_t: means the UNDERLYING INDEX CLOSING LEVEL on CALCULATION DAY t

UI_{TR_Q}: means the UNDERLYING INDEX CLOSING LEVEL in respect of the TRADE DATE of OPTION Q

For the avoidance of doubt, if OPTION Q meets the condition for unwind on CALCULATION DAY t immediately preceding a HALF TRADING DAY, then the UNWIND DATE TU_Q is set to the CALCULATION DAY immediately following the HALF TRADING DAY[2]

[2] Half Trading Day treatment is applied effective from 12 June 2025

2.2. NUMBER OF UNITS OF THE INDEX COMPONENTS

In relation to CALCULATION DAY t, the NUMBER OF UNITS $Units_{t,Qi_t}$ in respect of Option Qi_t traded on CALCULATION DAY t will be calculated in accordance with the following formula:

$$Units_{t,Qi_t} = \begin{cases} \frac{Index_{t-1}^{TR}}{252 \times UI_{t-1}} \times w_t & \text{if i is 1} \\ \frac{Index_{t-1}^{TR}}{252 \times UI_{t-1}} \times (1 - w_t) & \text{if i is 2} \end{cases}$$

Where:

$$w_t = \frac{DC_{TM_{t,}M2_t}}{DC_{M1_{t,}M2_t}}$$

With:

$DC_{t,t'}$: means the number of CALCULATION DAYS in the period commencing on (and including) CALCULATION DAY t and ending on (but excluding) CALCULATION DAY t'

$Index_{t-1}^{TR}$: means the Total Return level of the INDEX in respect of CALCULATION DAY t-1

UI_{t-1}: means the UNDERLYING INDEX CLOSING LEVEL in respect of the CALCULATION DAY immediately preceding CALCULATION DAY t

For the avoidance of doubt, $Units_{t,Qi_t}$ will always be a positive number in this index.

3. REBALANCE

3.1. ORDINARY REBALANCE

No ordinary rebalance takes place.

3.2. EXTRAORDINARY REBALANCE

No extraordinary rebalance takes place.

4. CALCULATION OF THE INDEX

4.1. INDEX FORMULA

The Excess Return level of the INDEX $Index_t^{ER}$ is calculated in accordance with the following formula:

- In relation to START DATE t_0:

$$Index_{t_0}^{ER} = 100$$

- On each following CALCULATION DAY t:

$$Index_t^{ER} = Index_{t-1}^{ER} + Index_t^{TR} - Index_{t-1}^{TR} \times (1 + ON_{t-1} \times \frac{Act(t-1,t)}{360})$$

The Total Return level of the INDEX $Index_t^{TR}$ is calculated in accordance with the following formula:

- In relation to START DATE t_0:

$$Index_{t_0}^{TR} = 100$$

- On each following CALCULATION DAY t:

$$Index_t^{TR} = PortfolioMtM_t + Cash_t$$

Where:

$Index_t^{TR}$: means the Total Return level of the INDEX on CALCULATION DAY t

ON_{t-1} : Overnight rate (SOFRRATE Index) level on CALCULATION DAY t-1 (or if such a rate is not available the immediately preceding rate)

$Act(t-1,t)$: means the number of calendar days from, and including, CALCULATION DAY t-1 to, but excluding the CALCULATION DAY t

$PortfolioMtM_t$: means the PORTFOLIO MARK-TO-MARKET in respect of CALCULATION DAY t

$Cash_t$: means the CASH AMOUNT in respect of CALCULATION DAY t

4.1.1. Portfolio Mark-To-Market

In relation to CALCULATION DAY t, the PORTFOLIO MARK-TO-MARKET $PortfolioMtM_t$ is calculated in accordance with the following formula:

$$PortfolioMtM_t = \sum_{\substack{Q \in COP_t \\ TU_Q > t \text{ AND } TE_Q > t}} Units_{TR_Q,Q} \times \left(Mid_{t,Q}\right)$$

With:

COP_t: each Option Q comprising the CONTINUING OPTION PORTFOLIO in respect of CALCULATION DAY t

$Units_{TR_Q,Q}$: the NUMBER OF UNITS in respect of OPTION Q traded on TRADE DATE TR_Q

$Mid_{t,Q}$ the MID PRICE of OPTION Q in respect of CALCULATION DAY t

4.1.2. Continuing Option Portfolio

In relation to CALCULATION DAY t, the CONTINUING OPTION PORTFOLIO COP_t is the set comprising of those OPTIONS Q that each satisfy the following criteria:

- TRADE DATE (TR_Q) in respect of OPTION Q falls on or prior to CALCULATION DAY t
- EXPIRATION DATE (TE_Q) in respect of OPTION Q falls strictly after CALCULATION DAY t
- UNWIND DATE (TU_Q) in respect of OPTION Q falls strictly after CALCULATION DAY t

4.1.3. Expiring Option Portfolio

In relation to CALCULATION DAY t, the EXPIRING OPTION PORTFOLIO EOP_t is the set comprising of those OPTIONS Q that each satisfy the following criteria:

- TRADE DATE (TR_Q) in respect of OPTION Q falls prior to CALCULATION DAY t
- EXPIRATION DATE (TE_Q) in respect of OPTION Q falls on the CALCULATION DAY t.

4.1.4. Unwinding Option Portfolio

In relation to CALCULATION DAY t, the UNWINDING OPTION PORTFOLIO UOP_t is the set comprising of those OPTIONS Q that each satisfy the following criteria:

- EXPIRATION DATE (TE_Q) in respect of OPTION Q falls strictly after CALCULATION DAY t
- UNWIND DATE (TU_Q) in respect of OPTION Q falls on the CALCULATION DAY t.

4.1.5. New Option Portfolio

In relation to CALCULATION DAY t, the NEW OPTION PORTFOLIO NOP_t is the set comprising of those OPTIONS Q that each satisfy the following criteria:

- TRADE DATE (TR_Q) in respect of OPTION Q falls on CALCULATION DAY t

4.1.6. Cash Amount

The CASH AMOUNT $Cash_t$ is calculated in accordance with the following formula:

- In relation to START DATE t_0:

$$Cash_{t_0} = 100$$

- In relation to any following CALCULATION DAY t:

$$Cash_t = Cash_{t-1} \times \left(1 + ON_{t-1} \times \frac{ACT_{t-1,t}}{360}\right) - PR_t + EV_t + UV_t$$

With:

PR_t: the PREMIUM PAID in respect of CALCULATION DAY t

EV_t: the EXERCISE VALUES in respect of CALCULATION DAY t

UV_t: the UNWIND VALUES in respect of CALCULATION DAY t

ON_{t-1}: the Overnight rate (SORFRATE Index) level as of the CALCULATION DAY t-1 (or if such a rate is not available the immediately preceding rate)

$ACT_{t-1,t}$: the number of calendar days from, and including, CALCULATION DAY t-1 to, but excluding CALCULATION DAY t

4.1.7. Premium Paid

In relation to CALCULATION DAY t, the PREMIUM PAID PR_t is calculated in accordance with the following formula:

$$PR_t = \sum_{Q \in NOP_t} Units_{TR_Q,Q} \times \left[Mid_{t,Q} + sign\left(Units_{TR_Q,Q}\right) \times f_Q \times Vega_{t,Q}\right]$$

With:

NOP_t: each OPTION Q comprising the NEW OPTION PORTFOLIO in respect of CALCULATION DAY t

$Units_{TR_Q,Q}$: the NUMBER OF UNITS in respect of OPTION Q traded on TRADE DATE TR_Q

$Mid_{t,Q}$ the MID PRICE of OPTION Q in respect of CALCULATION DAY t

$sign(x)$: 1 if $x > 0$ otherwise -1

f_Q: the FRICTION of OPTION Q in respect of CALCULATION DAY t

$Vega_{t,Q}$: the VEGA of OPTION Q in respect of CALCULATION DAY t

4.1.8. Exercise Values

In relation to CALCULATION DAY t, the EXERCISE VALUES EV_t is calculated in accordance with the following formula:

$$EV_t = \sum_{Q \in EOP_t} Units_{TR_Q,Q} \times Payout_Q$$

With:

EOP_t: each OPTION Q comprising the EXPIRING OPTION PORTFOLIO in respect of CALCULATION DAY t

$Units_{TR_Q,Q}$: the NUMBER OF UNITS in respect of OPTION Q traded on TRADE DATE TR_Q

$Payout_Q$: the PAYOUT of OPTION Q

4.1.9. Unwind Values

In relation to CALCULATION DAY t, the UNWIND VALUES UV_t is calculated in accordance with the following formula:

$$UV_t = \sum_{Q \in UOP_t} Units_{TR_Q,Q} \times \left[Mid_{t,Q} - sign\left(Units_{TR_Q,Q}\right) \times f_Q \times Vega_{t,Q}\right]$$

With:

UOP_t: each OPTION Q comprising the UNWINDING OPTION PORTFOLIO in respect of CALCULATION DAY t

$Units_{TR_Q,Q}$: the NUMBER OF UNITS in respect of OPTION Q traded on TRADE DATE TR_Q

$Mid_{t,Q}$ the MID PRICE of OPTION Q in respect of CALCULATION DAY t

$sign(x)$: 1 if $x > 0$ otherwise -1

f_Q: the FRICTION of OPTION Q in respect of CALCULATION DAY t

$Vega_{t,Q}$: the VEGA of OPTION Q in respect of CALCULATION DAY t

4.1.10. Payout

In relation to OPTION Q, the PAYOUT $Payout_Q$ is calculated in accordance with the following formula:

$$Payout_Q = \begin{cases} max\left(0, K_Q - USI_{TE_Q}\right) & \text{if type of Option } Q \text{ is Put} \\ max\left(0, USI_{TE_Q} - K_Q\right) & \text{if type of Option } Q \text{ is Call} \end{cases}$$

With:

Max: means the MAXIMUM FUNCTION

USI_{TE_Q}: the UNDERLYING SETTLEMENT INDEX LEVEL as of EXPIRATION DATE TE_Q

K_Q : the STRIKE PRICE of OPTION Q

TE_Q: the EXPIRATION DATE of OPTION Q

4.1.11. Premium

In relation to CALCULATION DAY t, the PREMIUM $PX_{t,Q}$ of OPTION Q as of CALCULATION DAY t is calculated in accordance with the following formula:

$$PX_{t,Q} = BlackOptionPrice\left(OptionType, Fwd_{t,TE_Q}, DF_{t,TE_Q}, K_Q, t, TE_Q, \sigma_{t,K_Q,TE_Q}\right)$$

With:

$BlackOptionPrice\left(OptionType, Fwd_{t,TE_Q}, DF_{t,TE_Q}, K_Q, t, TE_Q, \sigma_{t,K_Q,TE_Q}\right)$: the BLACK OPTION PRICE of OPTION Q as of CALCULATION DAY t as defined in Section 4.1.12

Fwd_{t,TE_Q}: the FORWARD in relation to CALCULATION DAY t and EXPIRATION DATE TE_Q as calculated in accordance with Section 4.1.20: Forward

DF_{t,TE_Q}: the DISCOUNT FACTOR in relation to CALCULATION DAY t and EXPIRATION DATE TE_Q as calculated in accordance with Section 4.1.18: Discount Factor

σ_{t,K_Q,TE_Q}: the Implied Volatility σ as of CALCULATION DAY t in relation to STRIKE PRICE K_Q of OPTION Q and EXPIRATION DATE TE_Q as calculated in accordance with Section 4.1.20: Forward

K_Q : the STRIKE PRICE of OPTION Q

TE_Q: the EXPIRATION DATE of OPTION Q

4.1.12. Black Option Price

The BLACK OPTION PRICE is calculated in relation to any ELIGIBLE LISTED OPTION with STRIKE PRICE K and EXPIRATION DATE TE on any CALCULATION DAY t in accordance with the following formula:

$$BlackOptionPrice\left(Put, Fwd_{t,TE}, DF_{t,TE}, K, t, TE, \sigma_{t,K,TE}\right)$$
$$= DF_{t,TE} \times \left(K \times IN\left(-d_{2,K,TE,t}\left(\sigma_{t,K,TE}\right)\right) - Fwd_{t,TE} \times IN\left(-d_{1,K,TE,t}\left(\sigma_{t,K,TE}\right)\right)\right)$$

$$BlackOptionPrice\left(Call, Fwd_{t,TE}, DF_{t,TE}, K, t, TE, \sigma_{t,K,TE}\right)$$
$$= DF_{t,TE} \times \left(Fwd_{t,TE} \times IN\left(d_{1,K,TE,t}\left(\sigma_{t,K,TE}\right)\right) - K \times IN\left(d_{2,K,TE,t}\left(\sigma_{t,K,TE}\right)\right)\right)$$

- Where:

$$d_{1,K,TE,t}(\sigma) = \frac{\log\left(\frac{Fwd_{t,TE}}{K}\right) + \frac{\sigma^2}{2} \times DCFT_{t,TE}}{\sigma \times \sqrt{DCFT_{t,TE}}}$$

and

$$d_{2,K,TE,t}(\sigma) = d_{1,K,TE,t}(\sigma) - \sigma \times \sqrt{DCFT_{t,TE}}$$

With:

$DF_{t,TE}$: the DISCOUNT FACTOR in relation to CALCULATION DAY t and EXPIRATION DATE TE

$Fwd_{t,TE}$: the FORWARD in relation to CALCULATION DAY t and EXPIRATION DATE TE

$\sigma_{t,K,TE}$: means the Implied Volatility σ in respect of CALCULATION DAY t in relation to EXPIRATION DATE TE and STRIKE PRICE K

$DCFT_{t,TE}$: The DAY COUNT FRACTION in respect to EXPIRATION DATE TE as of CALCULATION DAY t.

$\exp(.)$: EXPONENTIAL FUNCTION to the Basis of Euler's number e.

$IN(.)$: CUMULATIVE DISTRIBUTION FUNCTION of the Standard Normal Distribution

$\log(.)$: The NATURAL LOGARITHM FUNCTION

4.1.13. Eligible Listed Option Implied Volatility

The Eligible Listed Option Implied Volatility in relation to an ELIGIBLE LISTED OPTION with STRIKE PRICE K and EXPIRATION DATE TE on any CALCULATION DAY t is calculated as the implied volatility σ for which the Black Price for such option matches the ELIGIBLE LISTED OPTION Mid Price:

$$Mid_{t,O}^{TE,K} = BlackOptionPrice\left(OptionType, Fwd_{t,TE}, DF_{t,TE}, K, t, TE, \sigma\right)$$

With:

$Mid_{t,O}^{TE,K}$: The average of the bid and ask price of in respect of CALCULATION DAY t of the ELIGIBLE LISTED OPTION O expiring on EXPIRATION DATE TE with a STRIKE PRICE K

$BlackOptionPrice$: The BLACK OPTION PRICE Function as determined in accordance with Section 4.1.12

$OptionType$: The OPTION TYPE of ELIGIBLE LISTED OPTION $O_{m,t}^{k}$

$Fwd_{t,TE}$: the FORWARD in relation to CALCULATION DAY t and EXPIRATION DATE TE

$DF_{t,TE}$: the DISCOUNT FACTOR in relation to CALCULATION DAY t and EXPIRATION DATE TE

4.1.14. Delta

The DELTA $Delta_{t,Q}$ of OPTION Q as of CALCULATION DAY t is:

- if the type of Option Q is "Call", calculated in accordance with the following formula:

$$Delta_{t,Call,TE_Q}(K) = DF_{t,TE_Q} \times IN\left(d_{1,Q,t}\left(\sigma_{t,K,TE_Q}\right)\right)$$; and

- if the type of Option Q is "Put", calculated in accordance with the following formula:

$$Delta_{t,Put,TE_Q}(K) = DF_{t,TE_Q} \times \left(IN\left(d_{1,Q,t}\left(\sigma_{t,K,TE_Q}\right)\right) - 1\right)$$

Where:

$$d_{1,Q,t}(K) = \frac{\log\left(\frac{Fwd_{t,TE_Q}}{K}\right) + \frac{{\sigma_{t,K,TE_Q}}^2}{2} \times DCFT_{t,TE_Q}}{\sigma_{t,K,TE_Q} \times \sqrt{DCFT_{t,TE_Q}}}$$

With:

DF_{t,TE_Q}: the DISCOUNT FACTOR in respect to EXPIRATION DATE TE_Q of OPTION Q as of CALCULATION DAY t

Fwd_{t,TE_Q}: FORWARD in respect to EXPIRATION DATE TE_Q of OPTION Q as of CALCULATION DAY t

K: The STRIKE PRICE of OPTION Q

$DCFT_{t,TE_Q}$: The DAY COUNT FRACTION in respect to EXPIRATION DATE TE_Q of OPTION Q as of CALCULATION DAY t

$IN(.)$: CUMULATIVE DISTRIBUTION FUNCTION of the Standard Normal Distribution

$\log(.)$: The NATURAL LOGARITHM FUNCTION

σ_{t,K,TE_Q}: the IMPLIED VOLATILITY as of CALCULATION DAY t in relation to STRIKE PRICE K as of EXPIRATION DATE TE_Q of OPTION Q

The above formula is used to compute when restriking the option at a specific target delta. When options enter the portfolio every day, or when a new option is restruck after an unwound, we use the above formula.

4.1.15. Day Count Fraction

The DAY COUNT FRACTION in respect of EXPIRATION DATE TE as of CALCULATION DAY t is (i) the number of CALCULATION DAYS from (and including) CALCULATION DAY t to (and excluding) EXPIRATION DATE TE *divided by* (ii) 252.

4.1.16. Vega

The VEGA of OPTION Q as of CALCULATION DAY t is calculated as follows:

$$Vega_{Q,t} = \frac{\exp\left(-{d_{1,Q,t}\left(\sigma_{t,K_Q,TE_Q}\right)^2}/{2}\right) \times DF_{t,TE_Q} \times Fwd_{t,TE_Q} \times \sqrt{DCFT_{t,TE_Q}}}{\sqrt{2 \times \pi}}$$

Where:

$$d_{1,Q,t}(\sigma) = \frac{\log\left(\frac{Fwd_{t,TE_Q}}{K_Q}\right) + \frac{\sigma^2}{2} \times DCFT_{t,TE_Q}}{\sigma \times \sqrt{DCFT_{t,TE_Q}}}$$

With:

Fwd_{t,TE_Q}: FORWARD in respect to EXPIRATION DATE TE_Q of OPTION Q as of CALCULATION DAY t.

DF_{t,TE_Q}: DISCOUNT FACTOR in respect to EXPIRATION DATE TE_Q of OPTION Q as of CALCULATION DAY t

K_Q: The STRIKE PRICE of OPTION Q.

$DCFT_{t,TE_Q}$: The DAY COUNT FRACTION in respect to EXPIRATION DATE TE_Q of OPTION Q as of CALCULATION DAY t.

$\log(.)$: The NATURAL LOGARITHM FUNCTION.

$\exp(.)$: EXPONENTIAL FUNCTION to the Basis of Euler's number e.

σ_{t,K_Q,TE_Q}: the Implied Volatility σ as of CALCULATION DAY t in relation to STRIKE PRICE K_Q of OPTION Q and EXPIRATION DATE TE_Q

4.1.17. Gamma

The GAMMA of OPTION Q as of CALCULATION DAY t is calculated as follows:

$$gamma_{t,Q} = \frac{\exp\left(-{d_{1,Q,t}\left(\sigma_{t,K_Q,TE_Q}\right)^2}/{2}\right) \times DF_{t,TE_Q}}{\sqrt{2 \times \pi} \times Fwd_{t,TE_Q} \times \sigma_{t,K_Q,TE_Q} \times \sqrt{DCFT_{t,TE_Q}}}$$

Where:

$$d_{1,Q,t}\left(\sigma_{t,K_Q,TE_Q}\right) = \frac{\log\left(\frac{Fwd_{t,TE_Q}}{K_Q}\right) + \frac{\sigma^2}{2} \times DCFT_{t,TE_Q}}{\sigma \times \sqrt{DCFT_{t,TE_Q}}}$$

With:

Fwd_{t,TE_Q}: FORWARD in respect to EXPIRATION DATE TE_Q of OPTION Q as of CALCULATION DAY t.

DF_{t,TE_Q}: DISCOUNT FACTOR in respect to EXPIRATION DATE TE_Q of OPTION Q as of CALCULATION DAY t

K_Q: The STRIKE PRICE of OPTION Q.

$DCFT_{t,TE_Q}$: The DAY COUNT FRACTION in respect to EXPIRATION DATE TE_Q of OPTION Q as of CALCULATION DAY t.

$\log(.)$: The NATURAL LOGARITHM FUNCTION.

$\exp(.)$: EXPONENTIAL FUNCTION to the Basis of Euler's number e.

σ_{t,K_Q,TE_Q}: the Implied Volatility σ as of CALCULATION DAY t in relation to STRIKE PRICE K_Q of OPTION Q and EXPIRATION DATE TE_Q

4.1.18. Discount Factor

In relation to CALCULATION DAY t and EXPIRATION DATE TE, the DISCOUNT FACTOR $DF_{t,TE}$ is calculated as follows:

$$DF_{t,TE} = \exp\left(\log\left(DF_{t,T_1}\right) + \frac{DC_{T_1,TE} \times \left(\log\left(DF_{t,T_2}\right) - \log\left(DF_{t,T_1}\right)\right)}{DC_{T_1,T_2}}\right)$$

With:

T_1: means the ELIGIBLE EXPIRATION DATE T_1 selected in accordance with Section 4.1.19 Maturity Selection

T_2: means the ELIGIBLE EXPIRATION DATE T_2 selected in accordance with Section 4.1.19 Maturity Selection

DF_{t,T_1}: the DISCOUNT FACTOR in relation to CALCULATION DAY t and ELIGIBLE EXPIRATION DATE T_1 calculated in accordance with Section 4.1.21. If $T_1 = t$, then the DISCOUNT FACTOR in relation to CALCULATION DAY t and ELIGIBLE EXPIRATION DATE T_1 is 1.

DF_{t,T_2}: the DISCOUNT FACTOR in relation to CALCULATION DAY t and ELIGIBLE EXPIRATION DATE T_2 calculated in accordance with Section 4.1.21.

$DC_{T_1,TE}$: means the NUMBER OF CALENDAR DAYS in the period commencing on (and including) ELIGIBLE EXPIRATION DATE T_1 and ending on (but excluding) EXPIRATION DATE TE.

DC_{T_1,T_2}: means the NUMBER OF CALENDAR DAYS in the period commencing on (and including) ELIGIBLE EXPIRATION DATE T_1 and ending on (but excluding) ELIGIBLE EXPIRATION DATE T_2.

$\log(.)$: The NATURAL LOGARITHM FUNCTION.

$\exp(.)$: EXPONENTIAL FUNCTION to the Basis of Euler's number e.

4.1.19. Maturity Selection

In relation to CALCULATION DAY t and EXPIRATION DATE TE, two expiration dates T_1, T_2 are selected with regards to TE following the below methodology:

- Where EXPIRATION DATE TE is lower than any EXPIRATION DATE within the set of ELIGIBLE EXPIRATION DATES, $T_1 = t$ and T_2 is the shortest ELIGIBLE EXPIRATION DATE in respect of CALCULATION DAY t.
- Where EXPIRATION DATE TE is strictly greater than any EXPIRATION DATE within the set of ELIGIBLE EXPIRATION DATES, $T_1 = T_2 = TE$.
- Otherwise, (i) T_1 is the furthest ELIGIBLE EXPIRATION DATE in respect of CALCULATION DAY t that is less than or equal to TE, and (ii) T_1 is the shortest ELIGIBLE EXPIRATION DATE in respect of CALCULATION DAY t that is greater than or equal to TE.

4.1.20. Forward

In relation to CALCULATION DAY t and EXPIRATION DATE TE, the FORWARD $Fwd_{t,TE}$is calculated as follows:

$$Fwd_{t,TE} = \exp\left(\log\left(Fwd_{t,T_1}\right) + \frac{DC_{T_1,TE} \times \left(\log\left(Fwd_{t,T_2}\right) - \log\left(Fwd_{t,T_1}\right)\right)}{DC_{T_1,T_2}}\right)$$

With:

T_1: means the ELIGIBLE EXPIRATION DATE T_1 selected in accordance with Section 4.1.19 Maturity Selection

T_2: means the ELIGIBLE EXPIRATION DATE T_2 selected in accordance with Section 4.1.19 Maturity Selection

Fwd_{t,T_1}: the FORWARD in relation to CALCULATION DAY t and EXPIRATION DATE T_1 calculated in accordance with Section 4.1.21. If $T_1 = t$, then the FORWARD in relation to CALCULATION DAY t and EXPIRATION DATE T_1 is the UNDERLYING SETTLEMENT INDEX LEVEL as of CALCULATION DAY t

Fwd_{t,T_2}: the FORWARD in relation to CALCULATION DAY t and EXPIRATION DATE T_2 calculated in accordance with Section 4.1.21

DC_{T_1,T_2}: means the NUMBER OF CALENDAR DAYS in the period commencing on (and including) ELIGIBLE EXPIRATION DATE T_1 and ending on (but excluding) ELIGIBLE EXPIRATION DATE T_2

$\log(.)$: The NATURAL LOGARITHM FUNCTION

4.1.21. Discount Factor and Forward for an Eligible Expiration Date

In relation to CALCULATION DAY t, for an EXPIRATION DATE of an ELIGIBLE LISTED OPTION, the DISCOUNT FACTOR and FORWARD for that EXPIRATION DATE shall be calculated in accordance with the following methodology:

For each STRIKE PRICE $K_{i,j}$, j ∈ {1,2, … , n_i } for the selected EXPIRATION DATE Ti on which both call and put prices are available, the Black Scholes model shall be used to calculate the "call-put parity" relation:

$$C_t^{Ti,Ki,j} - P_t^{Ti,Ki,j} = DF_i \times \left(Fwd_i - K_{i,j}\right)$$

With:

$C_t^{Ti,K_{i,j}}$: the MID-PRICE in respect of CALCULATION DAY t of the ELIGIBLE LISTED CALL OPTION expiring on EXPIRATION DATE T_i with a STRIKE PRICE of $K_{i.j}$

$P_t^{Ti,K_{i,j}}$: the MID-PRICE in respect of CALCULATION DAY t of the ELIGIBLE LISTED PUT OPTION expiring on EXPIRATION DATE T_i with a STRIKE PRICE of f $K_{i.j}$

Using the put-call parity formula for each strike, the following linear model is obtained:

$$Y = \alpha + \beta \times X$$

With for any j ∈ {1,2, … , n_i }

$$Y_j = C\left(K_{i,j}\right) - P(K_{i,j})$$

$$X_j = K_{i,j}$$

A linear regression of the model set out above is performed using the ordinary least squares estimation:

$$\beta = \frac{\sum_{j=1}^{n_i}(X_j - \bar{X})(Y_j - \bar{Y})}{\sum_{j=1}^{n_i}(X_j - \bar{X})^2}$$

$$\alpha = \bar{Y} - \beta \times \bar{X}$$

With:

$$\bar{X} = \frac{\sum_{j=1}^{n_i} X_j}{n_i};\ \bar{Y} = \frac{\sum_{j=1}^{n_i} Y_j}{n_i}$$

So for any j ∈ {1,2, … , n_i }, DF_i and Fwd_i are determined using the following relations:

$$Y_j = \alpha + \beta \times X_j$$

$$DF_i \times (Fwd_i - K_{i,j}) = \alpha + \beta \times K_{i,j}$$

$$DF_i = -\beta$$

$$Fwd_i = -\frac{\alpha}{\beta}$$

4.1.22. Implied Volatility

In relation to CALCULATION DAY t, STRIKE PRICE K and EXPIRATION DATE TE, the IMPLIED VOLATILITY $\sigma_{t,K,TE}$ is calculated based on the following methodology:

In order to calculate the Implied Volatility, up to four listed options are required.

In relation to CALCULATION DAY t and EXPIRATION DATE TE, two expiration dates T_1, T_2 are selected in accordance with Section 4.1.19 Maturity Selection.

The DISCOUNT FACTOR and FORWARD for the two selected expiration dates are calculated in accordance with Section 4.1.21: Discount Factor and Forward for an Eligible Expiration Date

With respect to each selected ELIGIBLE EXPIRATION DATE T_i, two strikes K_1, and K_2 are selected using the following criteria:

- Where STRIKE PRICE K is strictly lower than the lowest STRIKE PRICE of ELIGIBLE LISTED OPTION in respect of CALCULATION DAY t and EXPIRATION DATE T_i , $K_2 = K_1$, where K_1 is lowest STRIKE PRICE of ELIGIBLE LISTED OPTION in respect of CALCULATION DAY t and EXPIRATION DATE T_i
- Where STRIKE PRICE K is strictly higher than the highest STRIKE PRICE of ELIGIBLE LISTED OPTION in respect of CALCULATION DAY t and EXPIRATION DATE T_i , $K_1 = K_2$, where K_2 is the highest STRIKE PRICE of ELIGIBLE LISTED OPTION in respect of CALCULATION DAY t and EXPIRATION DATE T_i
- Otherwise, (i) K_1 is the highest STRIKE PRICE of ELIGIBLE LISTED OPTION in respect of CALCULATION DAY t and EXPIRATION DATE $T_i$that is less than or equal to STRIKE PRICE K, and (ii) K_2 is the lowest STRIKE PRICE of ELIGIBLE LISTED OPTION in respect of CALCULATION DAY t and EXPIRATION DATE T_i that is higher than or equal to STRIKE PRICE K

The four selected ELIGIBLE LISTED OPTIONS set to be of OPTION TYPE Put.

Once the DISCOUNT FACTOR, FORWARD, EXPIRATION DATE and STRIKE PRICE are determined for the four selected ELIGIBLE LISTED OPTIONS, their implied volatilities are determined in accordance with Section 4.1.13: Eligible Listed Option Implied Volatility, namely: σ_{t,K_1,T_1} , σ_{t,K_2,T_1} , σ_{t,K_1,T_2} , σ_{t,K_2,T_2}.

The implied volatility for the ELIGIBLE LISTED OPTION WITH STRIKE PRICE K and for the two selected ELIGIBLE EXPIRATION DATE T_1, T_2 is thus interpolated as follows:

$$\sigma_{t,K,T_1} = \begin{cases} \sigma_{t,K_1,T_1} + \dfrac{(K-K_1)\times\left(\sigma_{t,K_2,T_1}-\sigma_{t,K_1,T_1}\right)}{(K_2-K_1)} & if\ K_1 \neq K_2 \\ \sigma_{t,K_1,T_1} & otherwise \end{cases}$$

$$\sigma_{t,K,T_2} = \begin{cases} \sigma_{t,K_1,T_2} + \dfrac{(K-K_1)\times\left(\sigma_{t,K_2,T_2}-\sigma_{t,K_1,T_2}\right)}{(K_2-K_1)} & if\ K_1 \neq K_2 \\ \sigma_{t,K_1,T_2} & otherwise \end{cases}$$

Finally, the IMPLIED VOLATILITY $\sigma_{t,K,TE}$ in relation to CALCULATION DAY t, STRIKE PRICE K and EXPIRATION DATE TE is calculated as follows:

$$\sigma_{t,K,TE} = \begin{cases} \sqrt{\dfrac{1}{DC_{t,TE}} \times Max\left(0, \left(\sigma_{t,K,T_1}\right)^2 \times DC_{t,T_1} + \dfrac{DC_{T_1,TE} \times \left[\left(\sigma_{t,K,T_2}\right)^2 \times DC_{t,T_2} - \left(\sigma_{t,K,T_1}\right)^2 \times DC_{t,T_1}\right]}{DC_{T_1,T_2}}\right)} & if\ T_1 \neq T_2 \\ \sigma_{t,K,T_1}, & otherwise \end{cases}$$

With:

σ_{t,K,T_1}: means the Implied Volatility in respect of Calculation Day t with Expiration Date T_1 being an Eligible Expiration Date

σ_{t,K,T_2}: means the Implied Volatility in respect of CALCULATION DAY t with EXPIRATION DATE T_2 being an ELIGIBLE EXPIRATION DATE

DC_{t,T_1}: means the number of CALCULATION DAYS in the period commencing on (and including) CALCULATION DAY t and ending on (but excluding) ELIGIBLE EXPIRATION DATE T_1

DC_{t,T_2}: means the number of CALCULATION DAYS in the period commencing on (and including) CALCULATION DAY t and ending on (but excluding) ELIGIBLE EXPIRATION DATE T_2

$DC_{T_1,TE}$: means the number of CALCULATION DAYS in the period commencing on (and including) ELIGIBLE EXPIRATION DATE T_1 and ending on (but excluding) EXPIRATION DATE TE

$DC_{T_2,TE}$: means the number of CALCULATION DAYS in the period commencing on (and including) ELIGIBLE EXPIRATION DATE T_2 and ending on (but excluding) EXPIRATION DATE TE

4.2. ACCURACY

The level of the INDEX will be rounded to 4 decimal places.

4.3. RECALCULATION

The INDEX ADMINISTRATOR makes the greatest possible efforts to accurately calculate and maintain the INDEX. However, errors in the determination process may occur from time to time for a variety of reasons (internal or external) and therefore cannot be completely ruled out in respect of any INDEX. The INDEX ADMINISTRATOR endeavors to correct all errors that have been identified within a reasonable period of time. The understanding of "a reasonable period of time" as well as the general measures

to be taken generally depend on the underlying and is specified in the SOLACTIVE Correction Policy, which is incorporated by reference and available on the SOLACTIVE website: https://www.solactive.com/documents/correction-policy/.

4.4. MARKET DISRUPTION

In periods of market stress the INDEX ADMINISTRATOR shall calculate the INDEX following predefined and exhaustive arrangements as described in the SOLACTIVE Disruption Policy, which is incorporated by reference and available on the SOLACTIVE website: https://www.solactive.com/documents/disruption-policy/. Such market stress can arise due to a variety of reasons, but generally results in inaccurate or delayed prices for one or more INDEX COMPONENTS. The determination of the INDEX may be limited or impaired at times of illiquid or fragmented markets and market stress.

5. MISCELLANEOUS

5.1. DISCRETION

Any discretion which may need to be exercised in relation to the determination of the INDEX (for example the determination of the Index Universe (if applicable), the selection of the INDEX COMPONENTS (if applicable) or any other relevant decisions in relation to the INDEX) shall be made in accordance with strict rules regarding the exercise of discretion or expert judgement by the INDEX ADMINISTRATOR.

5.2. METHODOLOGY REVIEW

The methodology of the INDEX is subject to regular review, at least annually. If a change of the methodology has been identified within such review (e.g. if the underlying market or economic reality has changed since the launch of the INDEX or if the present methodology is based on obsolete assumptions and factors and no longer reflects the reality as accurately, reliably and appropriately as before), such change will be made in accordance with the SOLACTIVE Methodology Policy, which is incorporated by reference and available on the SOLACTIVE website: https://www.solactive.com/documents/methodology-policy/.

Such change in the methodology will be announced on the SOLACTIVE website under the Section "Announcements", which is available at https://www.solactive.com/news/announcements/. The date of the last amendment of this INDEX is contained in this GUIDELINE.

5.3. CHANGES IN CALCULATION METHOD

The application by the INDEX ADMINISTRATOR of the method described in this document is final and binding. The INDEX ADMINISTRATOR shall apply the method described above for the composition and calculation of the INDEX. However, it cannot be excluded that the market environment, supervisory, legal and financial or tax reasons may require changes to be made to this method. The INDEX ADMINISTRATOR may also make changes to the terms and conditions of the INDEX and the method applied to calculate the INDEX that it deems to be necessary and desirable in order to prevent obvious or demonstrable error or to remedy, correct or supplement incorrect terms and conditions. The INDEX ADMINISTRATOR is not obliged to provide information on any such modifications or changes. Despite the modifications and changes, the INDEX ADMINISTRATOR will take the appropriate steps to ensure a calculation method is applied that is consistent with the method described above.

5.4. TERMINATION

The INDEX ADMINISTRATOR makes the greatest possible efforts to ensure the resilience and continued integrity of its indices over time. Where necessary, the INDEX ADMINISTRATOR shall follow a clearly defined and transparent procedure to adapt INDEX methodologies to account for changing underlying markets (see Section 5.2 "Methodology Review") in order to maintain continued reliability and comparability of the indices. Nevertheless, if no other options are available the orderly cessation of the INDEX may be indicated. This is usually the case when the underlying market

or economic reality, which an index is set to measure or to reflect, changes substantially and in a way not foreseeable at the time of inception of the INDEX, the index rules, and particularly the selection criteria, can no longer be applied coherently or the INDEX is no longer used as the underlying value for financial instruments, investment funds and financial contracts.

The INDEX ADMINISTRATOR has established and maintains clear guidelines on how to identify situations in which the cessation of an index is unavoidable, how stakeholders are to be informed and consulted and the procedures to be followed for a termination or the transition to an alternative index. Details are specified in the SOLACTIVE Termination Policy, which is incorporated by reference and available on the SOLACTIVE website: https://www.solactive.com/documents/termination-policy/.

5.5. INDEX COMMITTEE

An index committee composed of staff from the INDEX ADMINISTRATOR and its subsidiaries (the "**INDEX COMMITTEE**") is responsible for decisions regarding any amendments to the rules of the INDEX. Any such amendment, which may result in an amendment of the GUIDELINE, must be submitted to the INDEX COMMITTEE for prior approval and will be made in compliance with the Methodology Policy, which is available on the SOLACTIVE website: https://www.solactive.com/documents/methodology-policy/.

6. DEFINITIONS

"**ASK PRICE**" shall mean the official settlement sell price.

"**BENCHMARK REGULATION**" shall have the meaning as defined in Section "Introduction".

"**BID PRICE**" shall mean the official settlement buy price.

"**BLACK OPTION PRICE**" shall have the meaning given to it in section 4.1.12

"**BMR**" shall have the meaning as defined in Section "Introduction".

"CALCULATION DAY" is any weekday where both of the exchanges XNYS and XCBO identified by its MIC are open for business.

"CASH AMOUNT" shall the meaning as defined in section 4.1.6

"CONTINUING OPTION PORTFOLIO" has the meaning given to it in section 4.1.2

"CUMULATIVE DISTRIBUTION FUNCTION" defines the standard normal distribution.

"DAY COUNT FRACTION" has the meaning given to it in section 4.1.15.

"DELTA" has the meaning given to it in section 4.1.14.

"DISCOUNT FACTOR" has the meaning given to it in section 4.1.18

"ELIGIBLE EXPIRATION DATE" in relation to a CALCULATION DAY t is any EXPIRATION DATE of a LISTED OPTION which is a monthly expiry and happens to occur after the CALCULATION DAY immediately following CALCULATION DAY t. For such EXPIRATION DATE of a LISTED OPTION there must be at least 2 ELIGIBLE LISTED STRIKES available for both OPTION TYPES (Call and Put). There must also be at least 5 ELIGIBLE LISTED STRIKES for such EXPIRATION DATE.

"ELIGIBLE LISTED OPTION" in relation to a CALCULATION DAY t is any listed option identified by its chain RIC 0#SPX*.U identified by the three-tuple of type of Call or Put, the ELIGIBLE EXPIRATION DATE TE, and an ELIGIBLE STRIKE PRICE K. The listed option's MID PRICE must be greater than 0.

"ELIGIBLE LISTED CALL OPTION" in relation to a CALCULATION DAY t is an ELIGIBLE LISTED OPTION of type Call.

"ELIGIBLE LISTED PUT OPTION" in relation to a CALCULATION DAY t is an ELIGIBLE LISTED OPTION of type Put.

"ELIGIBLE LISTED STRIKE" is any STRIKE PRICE of a LISTED OPTION with a non-null BID PRICE and a non-null ASK PRICE where the bid price is lower or equal to the ASK PRICE.

"EXCHANGE PRICE" of an ELIGIBLE LISTED OPTION in relation to a CALCULATION DAY t means the average of the BID PRICE and ASK PRICE.

"EXPIRING OPTION PORTFOLIO" has the meaning given to it in section 4.1.3

"EXPIRATION DATE" is defined in relation to an OPTION and is the date on which such OPTION expires.

"GAMMA" has the meaning as defined in section 4.1.17

"FORWARD" has the meaning given to it in section 4.1.20

"FRICTION" is defined in relation to an OPTION and has the meaning given to it in section 2.1

"**GUIDELINE**" shall have the meaning as defined in Section "Introduction".

"**HALF TRADING DAY**" means a CALCULATION DAY on which an early market close is announced by the relevant Exchange

"**INDEX**" shall have the meaning as defined in Section "Introduction".

"**INDEX ADMINISTRATOR**" shall have the meaning as defined in Section "Introduction".

"**INDEX COMMITTEE**" shall have the meaning as defined in Section 5.5.

"**INDEX COMPONENTS**" shall mean all the OPTIONS with comprise the INDEX, at a specific time. For the avoidance of doubt, this means each of the NEW OPTION PORTFOLIO (i.e. new options entering the portfolio), CONTINUING OPTION PORTFOLIO, EXPIRING OPTION PORTFOLIO, AND UNWINDING OPTION PORTFOLIO .

"**INDEX CURRENCY**" is USD.

"**INDEX OWNER**" shall have the meaning as defined in Section "Introduction".

"IMPLIED VOLATILITY" has the meaning given to it in section 4.1.22.

"**LIVE DATE**" shall be the 2024-05-15.

"MAXIMUM FUNCTION" means, when followed by a series of amounts inside brackets, whichever is the larger of the amounts separated by a comma inside those brackets

"MID PRICE" is the average of BID PRICE and ASK PRICE.

"NATURAL LOGARITHM FUNCTION" is the inverse of the EXPONENTIAL FUNCTION.

"NEW OPTION PORTFOLIO" has the meaning given to it in section 4.1.5

"NUMBER OF UNITS" has the meaning given to it in section 2.2.

"OPTION" means a derivative that securitizes the right but not the obligation to buy (an option of type Call) or sell (an option of type Put) a pre-defined reference instrument relating to a position in respect of the UNDERLYING ASSET at a pre-defined day, the EXPIRATION DATE TE, for a pre-defined price, the STRIKE PRICE K.

"**OPTION TYPE**" shall mean the type of Option Q, which can be either Call or Put.

"PAYOUT" has the meaning given to it in section 4.1.10

"PORTFOLIO MARK-TO-MARKET" has the meaning given to it in section -

"PREMIUM" has the meaning given to it in section 4.1.11

"PREMIUM PAID" has the meaning given to it in section 4.1.7

"**REFINITIV**" is a data provider being a subsidiary of London Stock Exchange.

"**SOLACTIVE**" shall have the meaning as defined in Section "Introduction".

"START DATE" shall be 2015-07-02.

"STRIKE PRICE" is defined in relation to an OPTION and has the meaning given to it in section 2.1.

"**TARGET EXPIRATION DATE**" shall mean the two hundred and fifty-second CALCULATION DAY following CALCULATION DAY t.

"TRADE DATE" in relation to a traded OPTION Q means the CALCULATION DAY t where a position of OPTION Q has been entered.

"**UNDERLYING ASSET**" means the S&P 500 Index.

"UNDERLYING INDEX CLOSING LEVEL" in relation to a CALCULATION DAY t means the official close of the **UNDERLYING ASSET** on that day, identified by its RIC .SPX.

"UNDERLYING SETTLEMENT INDEX LEVEL" in relation to a CALCULATION DAY t means the official settlement of the **UNDERLYING ASSET** on that day, identified by its RIC .SET.

"UNWIND DATE" is defined in relation to an OPTION and has the meaning given to it in section 2.1.1.

"UNWINDING OPTION PORTFOLIO" has the meaning given to it in section 4.1.4

"UNWIND VALUES" has the meaning given to it in section 4.1.9

"VEGA" has the meaning given to it in section 4.1.16.

7. VERSIONING

VERSION	DATE	DESCRIPTION
1.0	May 1st, 2024	Initial Guideline creation (*initial version*)
1.1	May 22nd, 2024	Clarification of Definition of "Premium Paid" and "Unwind Values" (section 4.1.7 and 4.1.9)
1.2	October 17th , 2024	Changes are applied: i. to definition of M2, "Friction", and "Unwind Date" in section 2.1 ii. to definition of "Eligible Expiration Date" and "Eligible Listed Strike" in section 6
1.3	June 12th, 2025	Clarification on the half-trading day treatment (section 2.1) applied effective from 12 June 2025.
1.4	September 30th, 2025	Add Indicative Index.

Table 2 Versioning

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