

## INDEX DESCRIPTION: Global Multi Asset Risk Control Index

The Global Multi Asset Risk Control Index described below relates to a virtual rules-based index. There is no obligation of the Index Sponsor or the Index Calculation Agent to actually invest in the underlying assets.

An increase in the level of the Global Multi Asset Risk Control Index cannot be guaranteed. The Index Calculation Agent is not responsible for the performance of the Index. The tasks of the Index Calculation Agent are limited to the calculation and publication of the Index.

### 1. Index Objectives

The Global Multi Asset Risk Control Index (the "**Index**") aims to generate long-term positive returns by systematically investing in a collection of assets, chosen from different asset classes (the "Investment Portfolio").

The weighting of each asset within the Index depends on the results of a portfolio optimisation developed within Modern Portfolio Theory. Modern Portfolio Theory holds that an optimal investment portfolio is one that maximises expected return, corrected for risk, where "risk" is measured by the expected variance of the portfolio. Furthermore, Modern Portfolio Theory suggests that the investment portfolio that achieves this result is likely to be a diversified portfolio of uncorrelated assets.

The weighting of each asset and also the weighting of each asset class within the portfolio are subject to caps. This aims to achieve a certain level of diversity and limit estimation errors.

There is an additional drawdown overlay within the Index. This will allocate a percentage of the portfolio to risk-free assets ("**Cash Index**") in certain situations in order to reduce risk of drawdown. Drawdown here refers to percentage reduction in value of the Index from a previous peak.

The Index is denominated in EUR.

### **Investment Portfolio**

The Investment Portfolio is a notional long position in a collection of assets, whose percentage weights are determined by an optimisation. The percentage weights add up to 100%. Exposure to the different assets is given through a notional long position in an Exchange Traded Fund ("**ETF**"). The weighting of each ETF within the Investment Portfolio depends on the results of a portfolio optimisation performed according to the principles of the Modern Portfolio Theory. There is a rebalance on a quarterly basis in normal market conditions (low-to-moderate levels of the CBOE Volatility Index ("**VIX Index**"). During times when the VIX Index is high, the rebalance frequency can become monthly.

### **Cash Index**

The Cash Index is a notional long position in three ETFs, each of which derive their value from a cash deposit earning interest at EONIA. EONIA refers to an effective overnight interest rate set by the European Central Bank, which is calculated as a weighted average of all unsecured overnight lendings in the interbank market, undertaken in the European Union. The Index will have a variable percentage allocation to the Cash Index and this allocation is designed to protect the Investor from drawdown in the Index Level.

### 2. Index Definitions

For the purposes of this Index Description, the following definitions shall apply:

"**Cash Component ETF Sponsor**" means, with respect to each Cash Component ETF, the following companies who are ultimately responsible for the creation, maintenance and publication of the official Net Asset Values to the Data Vendor(s):

j	Component ETF	Component ETF Sponsor
1	CBEONIA GY Equity	ComStage ETF
2	XEON GY Equity	DB X-Trackers
3	CSH FP Equity	Lyxor ETFs

**"Cash Component ETF"** means the following ETFs, which can all have positive percentage weight in the Cash Index. Please refer to the column headings of this table for related definitions.

j	Component ETF	Currency	Inception Date	Total Expense Ratio	Asset Class	Proxy Index	Name	Domicile
1	CBEONIA GY Equity	EUR	03/09/2008	0.10%	Cash	EONIA Index	ComStage ETF Commerzbank EONIA Index TR UCITS ETF	Luxembourg
2	XEON GR Equity	EUR	28/06/2007	0.15%	Cash	EONIA Index	db x-trackers II EONIA UCITS ETF	Luxembourg
3	CSH FP Equity	EUR	01/10/2007	0.10%	Cash	EONIA Index	Lyxor ETF Euro Cash EuroMTS Eonia Investable	France

**"Cash Index Commencement Date"** means 28<sup>th</sup> February 2002.

**"Cash Index Intraday Level"** means the price calculated on a Trading Second by the Index Calculation Agent according to the rules set out in Section 3: "Index Calculation"

**"Closing Level"** means the closing price as published to the Data Vendor

**"Component ETFs"** mean the following ETFs, which can all have positive percentage weight in the Investment Portfolio. Please refer to the column headings of this table for related definitions.

i	Component ETF	Currency	Inception Date	Total Expense Ratio	Asset Class	Proxy Index	Name	Domicile
1	SX5EEX GY Equity	EUR	03/01/2001	0.16%	Western Equity	SX5T Index	iShares EURO STOXX 50 UCITS ETF	Germany
2	ISF LN Equity	Gbp	27/04/2000	0.07%	Western Equity	TUKXG Index	iShares Core FTSE 100 UCITS ETF	Ireland
3	CSPX LN Equity	USD	14/09/2010	0.07%	Western Equity	SPTR500N Index	iShares Core S&P 500 UCITS ETF	Ireland
4	TRSY LN Equity	USD	06/06/2011	0.15%	Western Treasury Bonds	LUATTRUU Index	SPDR Barclays US Treasury Bond UCITS ETF	Ireland
5	IEGA LN Equity	EUR	20/04/2009	0.20%	Western Treasury Bonds	LEATTREU Index	iShares Core Euro Government Bond UCITS ETF	Ireland
6	IGLT LN Equity	GBP	29/12/2006	0.20%	Western Treasury Bonds	FTFIBGT Index	iShares Core UK Gilts UCITS ETF	Ireland
7	IDEM LN Equity	USD	21/11/2005	0.75%	Emerging Markets	NDUEEGF Index	iShares MSCI Emerging Markets UCITS ETF DIST	Ireland
8	IEMB LN Equity	USD	20/02/2008	0.45%	Emerging Markets	JPEICORE Index	iShares JP Morgan \$ Emerging Markets Bond UCITS ETF	Ireland
9	LQDE LN Equity	USD	16/05/2003	0.20%	Corporate Bonds	IBOXIG Index	iShares \$ Corporate Bond UCITS ETF	Ireland
10	IHYU LN Equity	USD	14/09/2011	0.50%	Corporate Bonds	IBOXHY Index	iShares USD High Yield Corporate Bond UCITS ETF	Ireland
11	IEAC LN Equity	EUR	30/06/2009	0.20%	Corporate Bonds	LECPTRU Index	iShares Core Euro Corporate Bond UCITS ETF	Ireland
12	IDUP LN Equity	USD	23/03/2007	0.40%	Alternative	DJUSRET Index	iShares US Property Yield UCITS ETF	Ireland
13	CBCOMM GY Equity	USD	28/05/2009	0.30%	Alternative	CBCICOCA Index	ComStage ETF Commerzbank Commodity ex-Agriculture EW Index TR UCITS ETF	Luxembourg

**"Component ETF Exchange"** means, with respect to each Component ETF, the following

i	Component ETF	Component ETF Exchange
1	SX5EEX GY Equity	Deutsche Borse Xetra
2	ISF LN Equity	London Stock Exchange
3	CSPX LN Equity	London Stock Exchange

4	TRSY LN Equity	London Stock Exchange
5	IEGA LN Equity	London Stock Exchange
6	IGLT LN Equity	London Stock Exchange
7	IDEM LN Equity	London Stock Exchange
8	IEMB LN Equity	London Stock Exchange
9	LQDE LN Equity	London Stock Exchange
10	IHYU LN Equity	London Stock Exchange
11	IEAC LN Equity	London Stock Exchange
12	IDUP LN Equity	London Stock Exchange
13	CBCOMM GY Equity	Deutsche Börse Xetra

**“Component ETF Sponsor”** means, with respect to each Component ETF, the following companies who are ultimately responsible for the creation, maintenance and publication of the official Net Asset Values to the Data Vendor(s):

i	Component ETF	Component ETF Sponsor
1	SX5EEX GY Equity	iShares ETFs
2	ISF LN Equity	iShares ETFs
3	CSPX LN Equity	iShares ETFs
4	TRSY LN Equity	State Street Global Advisors
5	IEGA LN Equity	iShares ETFs
6	IGLT LN Equity	iShares ETFs
7	IDEM LN Equity	iShares ETFs
8	IEMB LN Equity	iShares ETFs
9	LQDE LN Equity	iShares ETFs
10	IHYU LN Equity	iShares ETFs
11	IEAC LN Equity	iShares ETFs
12	IDUP LN Equity	iShares ETFs
13	CBCOMM GY Equity	ComStage ETF

**"Data Vendor"** means Reuters

**“Domicile”** means with respect to a Cash Component ETF or a Component ETF, the country where the Fund has been incorporated by the Fund Management. These are shown in this section, within the tables above.

**"EONIA"** means the effective overnight interest rate set by the European Central Bank, which is calculated as a weighted average of all unsecured overnight lendings in the interbank market, undertaken in the European Union.

**“ETF Closing Level”** means, in respect of an Component ETF or Cash Component ETF, the level which is used to calculate the Index Level for each Index Calculation Date at or before the cut-off time of midday (12pm) in London. This level is determined by the calculation agent, according to the following steps:

- i. The Net Asset Value of the Component ETF corresponding to the Index Calculation Date; or if this is not available at or before the
- ii. An Indicative Net Asset Value of the Component ETF corresponding to the Index Calculation Date; or if this is not available
- iii. The last available intraday market price of the Component ETF corresponding to the Index Calculation Date; or if this is not available
- iv. The latest available Net Asset Value of the Component ETF immediately prior to the Index Calculation Date

**"EURUSD"** means, in respect of a notional exchange of EUR to USD in accordance with this Index Description, the applicable WM/Reuters "Spot Rate" for such exchange as published by The World Markets Company plc in conjunction with Reuters at approximately 4.00 p.m. (London time) on the relevant day or, if such rate is discontinued or unavailable on the relevant day for

any reason, such other exchange rate for the relevant currency conversion as the Sub-Index Calculation Agent in its reasonable discretion (*billiges Ermessen*) (§ 315 German Civil Code (BGB)) shall determine appropriate by reference to an alternative foreign exchange rate service.

**"EURGBP"** means, in respect of a notional exchange of EUR to GBP in accordance with this Index Description, the applicable WM/Reuters "Spot Rate" for such exchange as published by The World Markets Company plc in conjunction with Reuters at approximately 4.00 p.m. (London time) on the relevant day or, if such rate is discontinued or unavailable on the relevant day for any reason, such other exchange rate for the relevant currency conversion as the Sub-Index Calculation Agent in its reasonable discretion (*billiges Ermessen*) (§ 315 German Civil Code (BGB)) shall determine appropriate by reference to an alternative foreign exchange rate service.

**"EURGBP1M"** means the monthly contract between two parties to buy EUR in exchange for GBP on the next Forward Rolling Date. The price is quoted in GBP and means the exchange rate for EUR 1 in GBP based on the WM/Reuters close fixing for the relevant date as published by The World Markets Company plc in conjunction with Reuters at approximately 4.00 p.m. (London time)

**"EURUSD1M"** means the monthly contract between two parties to buy EUR in exchange for USD on the next Forward Rolling Date. The price is quoted in USD and means the exchange rate for EUR 1 in USD based on the WM/Reuters close fixing for the relevant date as published by The World Markets Company plc in conjunction with Reuters at approximately 4.00 p.m. (London time)

**"Extraordinary Selection Date"** means a day that is four Index Calculation Dates immediately preceding an Extraordinary Rebalance Date.

**"Extraordinary Rebalance Date"** means the last Index Calculation Date of the each month except February, May, August and November, where the VIX Index on the corresponding Extraordinary Selection Date was at or above 25%.

**"Frankfurt Trading Day"** means all weekdays when Frankfurt Stock Exchange is open for trading.

**"Frankfurt Trading Hours"** means the hours when the Frankfurt Stock Exchange is open for trading. This is expected to be 9:00 a.m. until 5:30 p.m. Central Eastern Time (CET) on all Index Calculation Dates.

**"Futures Exchange"** with respect to an Index Component ETF means the options or futures exchange with the highest trading volume of options or futures contracts relating to the Index Component ETF. If options or futures contracts on the Index Component ETF are not traded on any exchange, the Futures Exchange shall be the options or futures exchange with the highest amount of options or futures contracts relating to shares of companies having their residency in the country in which the Fund Company has its residence. If there is no options or futures exchange in the country in which the Fund Company has its residency on which options or futures contracts on shares are traded, the Index Sponsor will determine the Futures Exchange in its reasonable discretion (*billiges Ermessen*) (§ 315 German Civil Code (BGB)).

**"Fund Management"** with respect to an Index Component ETF means the management of the Fund which includes (i) any entity specified in the Memorandum which is responsible for providing investment management advice to the Fund and/or to any relevant third party, and/or (ii) any entity or individual who is responsible to manage the business and the affairs of the Fund, and/or (iii) any individual or group of individuals specified in the Memorandum who is/are responsible for overseeing the activities of the Fund and/or (iv) any entity specified in the Memorandum that is responsible for the administration of the Fund and the determination and publication of the NAV of the relevant Index Component ETF.

**"Fund"** or **"Fund Company"** means with respect to an Index Component ETF, the Sponsor as given in the tables above in this Section. These are registered investment companies consisting of separate investment portfolios, as more fully described in the Memorandum.

**"FX Forward Rolling Date"** means the last Index Calculation Date of each calendar month.

**"Index Calculation Date"** means any weekday which is a normal trading day for the London Stock Exchange, Frankfurt Stock Exchange and New York Stock Exchange.

**"Index Currency"** means EUR.

**"Index Component Commencement Date"** means 30<sup>th</sup> July 2001.

**"Index Commencement Date"** means 28<sup>th</sup> February 2002.

**"Indicative Net Asset Value (or iNAV)"** means, in respect of a Component ETF, the indicative per-share value. This is usually calculated by dividing the total value of all the securities in the Exchange Traded Fund's portfolio, less any liabilities, by the number of fund shares outstanding. Moreover, this is usually calculated before the NAV is calculated and may be different to the NAV.

**"Index Calculation Agent"** means Solactive Aktiengesellschaft.

**"Index Sponsor"** means Commerzbank Aktiengesellschaft.

**"Index Launch Date"** means 17<sup>th</sup> November 2016.

**"Index Closing Level"** means the price of the Index as calculated by the Index Calculation Agent in accordance with Section 3 - Index Calculation, and published in accordance with Section 4 - Index Publication.

**"Index Rebalance Date"** means the last Index Calculation Date of February, May, August and November.

**"Index Selection Date"** means four Index Calculation Dates immediately preceding the Index Rebalance Date

**"Investment Portfolio Commencement Date"** means 28<sup>th</sup> February 2002.

**"Memorandum"** with respect to an Component ETF or Cash Component ETF means the prospectus in relation to the relevant Fund Company, as amended and supplemented from time to time.

**"Net Asset Value (or NAV)"** means, in respect of an Component ETF, the per-share value. This is usually calculated by dividing the total value of all the securities in the Exchange Traded Fund's portfolio, less any liabilities, by the number of fund shares outstanding.

**"NAV Publication Date"** means, in respect of an Component ETF, any weekday on which the Net Asset Value has been published.

**"Trading Second"** means a second during a Frankfurt Trading Day.

**"VIX Index"** means the CBOE Volatility Index, which is a measure of the implied volatility of 1-month options on the S&P 500 Index. It is calculated and published by the VIX Index Sponsor on Bloomberg page "VIX Index".

**"VIX Index Sponsor"** means the Chicago Board Options Exchange (or any acceptable successor thereto).

**"Withholding Tax Rate"** means a percentage given in the below table, subject to change due to a change or amendment to the withholding tax laws of the Component ETF Domicile or any political subdivision or any authority having power to tax, or in case of a change in or amendment to the official interpretation or application of any such laws, rules or regulations by any legislative body, court, governmental agency or regulatory authority, as determined (in its reasonable discretion (*billiges Ermessen*) (§ 315 German Civil Code (BGB)) and communicated by the Index Sponsor.

Time Period	Luxembourg	Ireland	Germany
01/01/2001 - 01/01/2002	25%	22%	25%
01/01/2002 - 01/01/2003	25%	20%	20%
01/01/2003 - 02/05/2007	20%	20%	20%
02/05/2007 – 01/01/2009	15%	20%	20%
01/01/2009 – 01/01/2012	15%	20%	25%
01/01/2012 – Index Launch Date	15%	20%	26.375%

### **3. Index Calculation**

#### **Initial Index Level**

The Index was initially calculated on the Index Commencement Date. The initial Index level (the "**Initial Index Level**") on the Index Commencement Date is 100 index points, one index point corresponding to EUR 1.00.

#### **Intraday Index Calculation**

During Frankfurt Trading Days following the Index Launch Date, the Index Calculation Agent will calculate the intraday Index Level. The Index Intraday Level will be published by the Index Calculation Agent in accordance with Section 4 - Index Publication. In the avoidance of doubt, all references to Index Rebalance Dates in the section below could mean Index Rebalance Date or Extraordinary Rebalance Date. Calculations will be made on the basis of the following formula:

$$\text{Index}(s_t) = UW_{IP}(r) \times IP(s_t) + UW_{\text{cash}}(r) \times \text{Cash}(s_t)$$

Where

Index( $s_t$ )	Means the Index Intraday Level at the Trading Second (s) on the Frankfurt Trading Day (t)
$UW_{ip}(r)$	Mans the Unit Weight of the Investment Portfolio on the Index Rebalance Date (r) immediately preceding the Frankfurt Trading Day (t), calculated according to the formula given below.
$UW_{\text{cash}}(r)$	Means the Unit Weight of the Cash Index on the Index Rebalance Date (r) immediately preceding the Frankfurt Trading Day (t), calculated according to the formula given below.
IP( $s_t$ )	Means the intraday level of the Investment Portfolio on the Trading Second (s) on Frankfurt Trading Day (t)
Cash( $s_t$ )	Means the intraday level of the Cash Index on the Trading Second (s) on Frankfurt Trading Day (t)

#### **Index Closing Level Calculation**

For each Index Calculation Date following the Index Launch Date, the Index Calculation Agent will calculate the Index Closing Level on the following Index Calculation Date. The Index Closing Level will be published by the Index Calculation Agent in accordance with Section 4 - Index Publication. Calculations will be made on the basis of the following formula:

$$\text{Index}(t) = UW_{ip}(r) \times IP(t) + UW_{\text{cash}}(r) \times \text{Cash}(t)$$

Where

Index(t)	Means the Index Closing Level on Index Calculation Date (t)
$UW_{ip}(r)$	Means the Unit Weight of the Investment Portfolio on the Index Rebalance Date (r) immediately preceding the Index Calculation Date (t)
$UW_{\text{cash}}(r)$	Means the Unit Weight of the Cash Index on the Index Rebalance Date (r) immediately preceding the Index Calculation Date (t)
IP(t)	Means the level of the Investment Portfolio on Index Calculation Date (t)
Cash(t)	Means the level of the Cash Index on Index Calculation Date (t)

#### **Cash Index Calculation**

The Cash Index was initially calculated on the Cash Index Commencement Date. The initial Cash Index level (the "**Initial Cash Index Level**") on the Cash Index Commencement Date was 100 index points, one index point corresponding to EUR 1.00.

Following the Index Launch Date, the Index Calculation Agent will calculate the Cash Index during Frankfurt Trading Hours (the "**Intraday Cash Level**").

$$\text{Cash}(s_t) = \sum_{j=1}^3 \text{CW}_j(r) \times \text{Cash}_j(s_t)$$

Where

$\text{Cash}(s_t)$	Means the Intraday Cash Level on the Trading Second (s) of the Frankfurt Trading Day (t).
$\text{Cash}_j(s_t)$	Means the intraday level of the j-th Cash Index component on the Trading Second of the Frankfurt Trading Day (t), where j = 1, 2 or 3. This is calculated according to the formula below.
$\text{CW}_j(r)$	Means the unit weight of the j-th Cash Index on the Index Rebalance Date (r) immediately preceding the Frankfurt Trading Day (t). This is calculated according to the formula below.

$$\text{CW}_j(r) = \left(\frac{1}{3}\right) \times \left(\frac{\text{Cash}(r)}{\text{Cash}_j(r)}\right)$$

$\text{Cash}(r)$	Means the level of the Cash Index at the close of the Index Rebalance Date (r) immediately preceding the Frankfurt Trading Day (t).
$\text{Cash}_j(r)$	Means the level of the j-th Cash Index component at the close of the Index Rebalance Date (r) immediately preceding the Frankfurt Trading Day (t).

$$\text{Cash}_j(s_t) = \left\{ \text{Cash}_j(t-1) \times \frac{\text{CETF}_j(s_t)}{\text{CETF}_j(t-1)} \right.$$

Where

$\text{Cash}_j(t-1)$	Means the level of the j-th Cash Index component at the close of the Index Calculation Date immediately preceding the Frankfurt Trading Day (t), where j = 1, 2 or 3.
$\text{CETF}_j(s_t)$	Means the intraday level of the j-th Cash Component ETF on the Trading Second of the Frankfurt Trading Day (t)
$\text{CETF}_j(t-1)$	Means the ETF Closing Level of the j-th Cash Component ETF at the close of the Index Calculation Date immediately preceding Frankfurt Trading Day (t)

Following the Cash Index Commencement Date, the Index Calculation Agent will calculate the Cash Index Closing Level according to the below formula:

$$\text{Cash}(t) = \sum_{j=1}^3 \text{CW}_j(r) \times \text{Cash}_j(t)$$

Where

$\text{Cash}_j(t)$	Means the level of the j-th Cash Index component on the Index Calculation Date (t), where j = 1, 2 or 3. This is calculated according to the formula below.
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$$\text{Cash}_j(t) = \begin{cases} \text{Cash}_j(t-1) \times \left[ 1 + (\text{EONIA}(t-1) - \text{fee}_j) \times \frac{\text{dc}}{365} \right] & \text{if } t \leq \text{Cash Underlying ETF Inception Date} \\ \text{Cash}_j(t-1) \times \frac{\text{CETF}_j(t)}{\text{CETF}_j(t-1)} & \text{otherwise} \end{cases}$$

Where

EONIA (t - 1)	Means the Closing Level of EONIA on the Index Calculation Date immediately preceding (t)
CETF <sub>j</sub> (t)	Means the ETF Closing Level of the j-th Cash Component ETF on the Index Calculation Date (t)
dc	Means the number of calendar days between Index Calculation Date (t) and the Index Calculation Date immediately preceding (t)
fee <sub>j</sub>	Means the Total Expense Ratio of the j-th Cash Component ETF as given in Section 2: "Index Definitions"

### Investment Portfolio Calculation

The Investment Portfolio is a collection of investments which track the performance of the 13 Component ETFs given in Section 2, after taking into account FX hedging (each a "**Portfolio Component**").

The Investment Portfolio has formulae for intraday calculations, which are used as inputs to calculate the Intraday Index Level and closing calculations, which are used as inputs for the Index Closing Level.

The Investment Portfolio was initially calculated on the Investment Portfolio Commencement Date. The initial Investment Portfolio level (the "**Initial Investment Portfolio Level**") on the Investment Portfolio Commencement Date is 100 index points, one index point corresponding to EUR 1.00.

Following the Index Launch Date, the Index Calculation Agent will calculate the Investment Portfolio during Frankfurt Trading Days. This is an input for the calculation and publication of the Intraday Index Level.

$$\text{IP}(s_t) = \sum_{i=1}^{13} \text{IPW}_i(r) \times \text{PC}_i(s_t)$$

Where

IP(s <sub>t</sub> )	Means the level of the Investment Portfolio on the Trading Second (s) of the Frankfurt Trading Day (t)
IPW <sub>i</sub> (r)	Means the unit weight of the i-th Portfolio Component on Index Rebalance Date (r) immediately preceding Frankfurt Trading Day (t), which is calculated according to the formula below.
PC <sub>i</sub> (s <sub>t</sub> )	Means the level of the i-th Portfolio Component on the Trading Second (s) of the Frankfurt Trading Day (t), which is calculated according to the formula below

$$\text{IPW}_i(r) = \text{MPW}_i(r) \times \frac{\text{IP}(r)}{\text{PC}_i(r)}$$

Where



IP(r)	Means the level of the Investment Portfolio at the close of the Index Rebalance Date immediately preceding Frankfurt Trading Day (t)
MPW <sub>i</sub> (r)	Means the Model Percentage Weight of the i-th Portfolio Component on the Index Rebalance Date immediately preceding Frankfurt Trading Day (t), calculated according to the formula given in Appendix 1: "Weights Calculation".
PC <sub>i</sub> (r)	Means the level of the i-th Portfolio Component on Index Rebalance Date (r) immediately preceding Frankfurt Trading Day (t)

For i = 1, 5 and 11 EUR denominated Portfolio Components

$$PC_i(s_t) = \left\{ PC_i(t-1) \times \frac{ADJ_i(s_t)}{ADJ_i(t-1)} \right.$$

Where

PC<sub>i</sub>(t-1) Means the level of the i-th Portfolio Component on the Index Calculation Date immediately preceding Frankfurt Trading Day (t) calculated according to the formula below.

ADJ<sub>i</sub>(t-1) Means the level of the i-th adjusted Component ETF as calculated on the Index Calculation Date immediately preceding Frankfurt Trading Day (t), according to the formula given below.

ADJ<sub>i</sub>(s<sub>t</sub>) Means the intraday level of the i-th adjusted Component ETF as calculated on the Trading Second (s) on the Frankfurt Trading Day (t), according to the formula given below.

$$ADJ_i(s_t) = ADJ_i(t-1) \times \frac{ETF_i(s_t)}{ETF_i(t-1)}$$

ETF<sub>i</sub>(s<sub>t</sub>) Means the intraday level of the i-th Component ETF on the Trading Second of the Frankfurt Trading Day (t)

ETF<sub>i</sub>(t-1) Means the ETF Closing Level of the i-th Component ETF on the NAV Publication Date immediately preceding the Frankfurt Trading Day (t)

Following the Index Component Commencement Date, the Index Calculation Agent will calculate the closing level of the Portfolio Component according to the following formula:

$$PC_i(t) = \begin{cases} PC_i(t-1) \times \left( \frac{Proxy_i(t)}{Proxy_i(t-1)} - fee_i \times \frac{dc}{365} \right) & \text{if } t \leq \text{Underlying ETF Inception Date} \\ PC_i(t-1) \times \left( \frac{ADJ_i(t)}{ADJ_i(t-1)} \right) & \text{otherwise} \end{cases}$$

Where

PC<sub>i</sub>(t) Means the level of the i-th Portfolio Component on the Index Calculation Date (t)

Proxy<sub>i</sub>(t) Means the Closing Level of the Proxy Index of the i-th Component ETF on Index Calculation Date (t)

fee<sub>i</sub> Means the Total Expense Ratio of the i-th Component ETF as given in the table in Section 2 above.

dc Means the number of calendar days between the Index Calculation Date (t) and

the Index Calculation Date immediately preceding (t)

ADJ<sub>i</sub>(t) Means the level of the i-th Adjusted Component ETF as calculated on Index Calculation Date (t), according to the formula given below.

For each (i), the Index Calculation Agent will calculate the Adjusted Component ETF level for each day where the NAV of this Component ETF is published following the Component ETF Inception Date.

$$ADJ_i(p) = \begin{cases} ETF_i(p) & \text{if } p = \text{Underlying ETF Inception Date} \\ ADJ_i(p-1) \times ETF_i(p) \times \frac{1 + \frac{(1 - tax_i(p)) \times div_i(p)}{ETF_i(p-1) - div_i(p)}}{ETF_i(p-1)} & \text{otherwise} \end{cases}$$

Where

ADJ<sub>i</sub>(p) Means the level of the i-th adjusted Component ETF on the NAV Publication Date (p)

ETF<sub>i</sub>(p) Means the ETF Closing Level of the i-th Component ETF on the NAV Publication Date (p) rounded to 3 decimal places

ADJ<sub>i</sub>(p-1) Means the level of the i-th adjusted Component ETF on the NAV Publication Date immediately preceding (p)

div<sub>i</sub>(p) Means the dividend payment for the i-th Component ETF on the NAV Publication Date (p). If p is not an ex-date for a dividend payment, then div<sub>i</sub>(p) = 0

ETF<sub>i</sub>(p-1) Means the ETF Closing Level of the i-th Component ETF on the NAV Publication Date immediately preceding (p) rounded to 3 decimal places

tax<sub>i</sub>(p) Means the Withholding Tax Rate applicable to the dividend payment of the i-th Component ETF on NAV Publication Date (p). This depends on the Domicile of the Component ETF.

For i = 2 and 6 GBP Denominated Portfolio Components

$$PC_i(s_t) = UFPC_i(s_t) + FXH_i(s_t)$$

Where

UFPC<sub>i</sub>(s<sub>t</sub>) Means the intraday level of the i-th FX unhedged Portfolio Component on the Trading Second of the Frankfurt Trading Day (t) calculated according to the formula below

FXH<sub>i</sub>(s<sub>t</sub>) Means the intraday level of the i-th FX Hedge on the Trading Second of the Frankfurt Trading Day (t), calculated according to the formula below

$$FXH_i(s_t) = PC_i(r-1) \times EURGBP(r-1) \times \left[ \left( \frac{1}{EURGBPIM(r)} \right) - \left( \frac{1}{EURGBP(s_t)} \right) - \left( \frac{D-d}{D} \right) \times \left( \left( \frac{1}{EURGBPIM(s_t)} \right) - \left( \frac{1}{EURGBP(s_t)} \right) \right) \right]$$

Where

PC<sub>i</sub>(r-1) Means the level of the i-th Portfolio Component on the Index Calculation Date immediately preceding the FX Forward Rolling Date (r) immediately preceding

	Frankfurt Trading Day (t)
EURGBP (r – 1)	Means the EURGBP Closing Level on the Index Calculation Date immediately preceding the FX Forward Rolling Date (r) immediately preceding Frankfurt Trading Day (t)
EURGBP 1M(r)	Means the EURGBP 1 month forward level on the FX Forward Rolling Date (r) immediately preceding Frankfurt Trading Day (t)
D	Means the number of calendar days starting from, but not including, the FX Forward Rolling Date immediately preceding Frankfurt Trading Day (t) up to and including the FX Forward Rolling Date following Frankfurt Trading Day (t)
d	Means the number of calendar days starting from, but not including, the FX Forward Rolling Date immediately preceding Frankfurt Trading Day (t) up to and including Frankfurt Trading Day (t)
EURGBP1M(s <sub>t</sub> )	Means the intraday level of the EURGBP 1 month forward on the Trading Second of the Frankfurt Trading Day (t)
EURGBP(s <sub>t</sub> )	Means the intraday level of EURGBP on the Trading Second of the Frankfurt Trading Day (t)

$$UFPC_i(s_t) = PC_i(r) \times \frac{UPC_i(s_t)}{UPC_i(r)} \times \frac{1/ EURGBP(s_t)}{1/ EURGBP(r)}$$

Where

PC <sub>i</sub> (r)	Means the level of the i-th Portfolio Component on the FX Forward Rolling Date (r) immediately preceding Frankfurt Trading Day (t)
UPC <sub>i</sub> (r)	Means the level of the i-th unhedged Portfolio Component on the FX Forward Rolling Date (r) immediately preceding Frankfurt Trading Day (t) as calculated by the formula below
UPC <sub>i</sub> (s <sub>t</sub> )	Means the intraday level of the i-th unhedged Portfolio Component on the Trading Second of the Frankfurt Trading Day (t) as calculated by the formula below
EURGBP(s <sub>t</sub> )	Means the intraday EURGBP level on the Trading Second of the Frankfurt Trading Day (t)
EURGBP (r)	Means the Closing Level of EURGBP on the Index Rebalance Date (r) immediately preceding Frankfurt Trading Day (t)

$$UPC_i(s_t) = UPC_i(t-1) \times \frac{ADJ_i(s_t)}{ADJ_i(t-1)}$$

UPC <sub>i</sub> (t – 1)	Means the level of the i-th unhedged Portfolio Component on the Index Calculation Date immediately preceding Frankfurt Trading Day (t) calculated according to the formula below.
ADJ <sub>i</sub> (t – 1)	Means the level of the i-th adjusted Component ETF as calculated on the Index Calculation Date immediately preceding Frankfurt Trading Day (t), according to the formula given below.
ADJ <sub>i</sub> (s <sub>t</sub> )	Means the intraday level of the i-th adjusted Component ETF as calculated on the Trading Second (s) on the Frankfurt Trading Day (t), according to the formula given below.

$$ADJ_i(s_t) = ADJ_i(t-1) \times \frac{ETF_i(s_t)}{ETF_i(t-1)}$$

$ETF_i(s_t)$  Means the intraday level of the i-th Component ETF on the Trading Second of the Frankfurt Trading Day (t)

$ETF_i(t-1)$  Means the ETF Closing Level of the i-th Component ETF on the NAV Publication Date immediately preceding the Frankfurt Trading Day (t)

Following the Index Component Commencement Date, the Index Calculation Agent will calculate the closing level of the Portfolio Component according to the following formula:

$$PC_i(t) = UFPC_i(t) + FXH_i(t)$$

Where

$UFPC_i(t)$  Means the level of the i-th FX unhedged Portfolio Component on the Index Calculation Date (t) calculated according to the formula below

$FXH_i(t)$  Means the level of the i-th FX Hedge on the Index Calculation Date (t), calculated according to the formula below

$$FXH_i(t) = PC_i(r-1) \times EURGBP(r-1) \times \left[ \left( \frac{1}{EURGBPIM(r)} \right) - \left( \frac{1}{EURGBP(t)} \right) - \left( \frac{D-d}{D} \right) \times \left[ \left( \frac{1}{EURGBPIM(t)} \right) - \left( \frac{1}{EURGBP(t)} \right) \right] \right]$$

Where

$PC_i(r-1)$  Means the level of the i-th Portfolio Component on the Index Calculation Date immediately preceding the FX Forward Rolling Date (r) immediately preceding Index Calculation Date (t)

$EURGBP(r-1)$  Means the EURGBP level on the Index Calculation Date immediately preceding the FX Forward Rolling Date (r) immediately preceding Index Calculation Date (t)

$EURGBPIM(r)$  EURGBP 1 month forward Closing Level on the FX Forward Rolling Date (r) immediately preceding Index Calculation Date (t)

$D$  Means the number of calendar days starting from, but not including, the FX Forward Rolling Date immediately preceding Index Calculation Date (t) up to and including the FX Forward Rolling Date following Index Calculation Date (t)

$d$  Means the number of calendar days starting from, but not including, the FX Forward Rolling Date immediately preceding Index Calculation Date (t) up to and including Frankfurt Trading Day (t)

$EURGBPIM(t)$  Means the Closing Level of the EURGBP 1 month forward on the Index Calculation Date (t)

$EURGBP(t)$  Means the Closing Level of EURGBP on the Trading Second of the Frankfurt Trading Day (t)

$$UFPC_i(t) = PC_i(r) \times \frac{UPC_i(t)}{UPC_i(r)} \times \frac{1/EURGBP(t)}{1/EURGBP(r)}$$

Where

$PC_i(r)$  Means the level of the i-th Portfolio Component on the FX Forward Rolling Date (r) immediately preceding the Index Calculation Date (t)

UPC <sub>i</sub> (r)	Means the level of the i-th unhedged Portfolio Component on the FX Forward Rolling Date (r) immediately preceding the Index Calculation Date (t) as calculated by the formula below
UPC <sub>i</sub> (t)	Means the level of the i-th unhedged Portfolio Component on the Index Calculation Date (t) as calculated by the formula below
EURGBP (t)	Means the Closing Level of EURGBP on the Index Calculation Date (t)
EURGBP (r)	Means the Closing Level of EURGBP on the Index Rebalance Date (r) immediately preceding Index Calculation Date (t)

$$UPC_i(t) = \begin{cases} UPC_i(t-1) \times \left( \frac{Proxy_i(t)}{Proxy_i(t-1)} - fee_i \times \frac{dc}{365} \right) & \text{if } t \leq \text{Underlying ETF Inception Date} \\ UPC_i(t-1) \times \left( \frac{ADJ_i(t)}{ADJ_i(t-1)} \right) & \text{otherwise} \end{cases}$$

Where

UPC <sub>i</sub> (t)	Means the level of the i-th unhedged Portfolio Component on the Index Calculation Date (t)
Proxy <sub>i</sub> (t)	Means the Closing Level of the Proxy Index of the i-th Component ETF on Index Calculation Date (t)
fee <sub>i</sub>	Means the Total Expense Ratio of the i-th Component ETF
dc	Means the number of calendar days between the Index Calculation Date (t) and the Index Calculation Date immediately preceding (t)
ADJ <sub>i</sub> (t)	Means the level of the i-th Adjusted Component ETF as calculated on Index Calculation Date (t), according to the formula given below.

For each (l = 2, 6 and 14), the Index Calculation Agent will calculate the Adjusted Component ETF level for each day where the NAV of this Component ETF is published following the Component ETF Inception Date.

$$ADJ_i(p) = \begin{cases} ETF_i(p) & \text{if } p = \text{Underlying ETF Inception Date} \\ ADJ_i(p-1) \times ETF_i(p) \times \frac{1 + \frac{(1 - tax_i(p)) \times div_i(p)}{ETF_i(p-1) - div_i(p)}}{ETF_i(p-1)} & \text{otherwise} \end{cases}$$

Where

ADJ <sub>i</sub> (p)	Means the level of the i-th adjusted Component ETF on the NAV Publication Date (p)
ETF <sub>i</sub> (p)	Means the official NAV of the i-th Component ETF on the NAV Publication Date (p) rounded to 3 decimal places
ADJ <sub>i</sub> (p - 1)	Means the level of the i-th adjusted Component ETF on the NAV Publication Date immediately preceding (p)
div <sub>i</sub> (p)	Means the dividend payment for the i-th Component ETF on the NAV Publication

Date (p). If p is not an ex-date for a dividend payment, then  $\text{div}_i(p) = 0$

$\text{ETF}_i(p-1)$  Means the ETF Closing Level of the i-th Component ETF on the NAV on the NAV Publication Date immediately preceding (p) rounded to 3 decimal places

$\text{tax}_i(p)$  Means the Withholding Tax Rate applicable to the dividend payment of the i-th Component ETF on NAV Publication Date (p). This depends on the Domicile of the Component ETF.

For i = 3, 4, 7, 8, 9, 10, 12 and 13 USD Denominated Portfolio Components

$$\text{PC}_i(s_t) = \text{UFPC}_i(s_t) + \text{FXH}_i(s_t)$$

Where

$\text{UFPC}_i(s_t)$  Means the intraday level of the i-th FX unhedged Portfolio Component on the Trading Second of the Frankfurt Trading Day (t) calculated according to the formula below

$\text{FXH}_i(s_t)$  Means the intraday level of the i-th FX Hedge on the Trading Second of the Frankfurt Trading Day (t), calculated according to the formula below

$$\text{FXH}_i(s_t) = \text{PC}_i(r-1) \times \text{EURUSD}(r-1) \times \left[ \left( \frac{1}{\text{EURUSDIM}(r)} \right) - \left( \frac{1}{\text{EURUSD}(s_t)} \right) - \left( \frac{D-d}{D} \right) \times \left( \left( \frac{1}{\text{EURUSDIM}(s_t)} \right) - \left( \frac{1}{\text{EURUSD}(s_t)} \right) \right) \right]$$

Where

$\text{PC}_i(r-1)$  Means the level of the i-th Portfolio Component on the Index Calculation Date immediately preceding the FX Forward Rolling Date (r) immediately preceding Frankfurt Trading Day (t)

$\text{EURUSD}(r-1)$  Means the EURUSD level on the Index Calculation Date immediately preceding the FX Forward Rolling Date (r) immediately preceding Frankfurt Trading Day (t)

$\text{EURUSDIM}(r)$  Means the EURUSD 1 month forward level on the FX Forward Rolling Date (r) immediately preceding Frankfurt Trading Day (t)

D Means the number of calendar days starting from, but not including, the FX Forward Rolling Date immediately preceding Frankfurt Trading Day (t) up to and including the FX Forward Rolling Date following Frankfurt Trading Day (t)

d Means the number of calendar days starting from, but not including, the FX Forward Rolling Date immediately preceding Frankfurt Trading Day (t) up to and including Frankfurt Trading Day (t)

$\text{EURUSDIM}(s_t)$  Means the intraday level of the EURUSD 1 month forward on the Trading Second of the Frankfurt Trading Day (t)

$\text{EURUSD}(s_t)$  Means the intraday level of EURUSD on the Trading Second of the Frankfurt Trading Day (t)

$$\text{UFPC}_i(s_t) = \text{PC}_i(r) \times \frac{\text{UPC}_i(s_t)}{\text{UPC}_i(r)} \times \frac{1/\text{EURUSD}(s_t)}{1/\text{EURUSD}(r)}$$

Where

$\text{PC}_i(r)$  Means the level of the i-th Portfolio Component on the FX Forward Rolling Date (r) immediately preceding Frankfurt Trading Day (t)

$UPC_i(r)$  Means the level of the i-th unhedged Portfolio Component on the FX Forward Rolling Date (r) immediately preceding Frankfurt Trading Day (t) as calculated by the formula below

$UPC_i(s_t)$  Means the intraday level of the i-th unhedged Portfolio Component on the Trading Second of the Frankfurt Trading Day (t) as calculated by the formula below

$EURUSD(s_t)$  Means the intraday EURUSD level on the Trading Second of the Frankfurt Trading Day (t)

$EURUSD(r)$  Means the Closing Level of EURUSD on the FX Forward Rolling Date (r) immediately preceding Frankfurt Trading Day (t)

$$UPC_i(s_t) = UPC_i(t-1) \times \frac{ADJ_i(s_t)}{ADJ_i(t-1)}$$

$UPC_i(t-1)$  Means the level of the i-th unhedged Portfolio Component on the Index Calculation Date immediately preceding Frankfurt Trading Day (t) calculated according to the formula below.

$ADJ_i(t-1)$  Means the level of the i-th adjusted Component ETF as calculated on the Index Calculation Date immediately preceding Frankfurt Trading Day (t), according to the formula given below.

$ADJ_i(s_t)$  Means the intraday level of the i-th adjusted Component ETF as calculated on the Trading Second (s) on the Frankfurt Trading Day (t), according to the formula given below.

$$ADJ_i(s_t) = ADJ_i(t-1) \times \frac{ETF_i(s_t)}{ETF_i(t-1)}$$

$ETF_i(s_t)$  Means the intraday level of the i-th Component ETF on the Trading Second of the Frankfurt Trading Day (t)

$ETF_i(t-1)$  Means the ETF Closing Level of the i-th Component ETF on the NAV Publication Date immediately preceding the Frankfurt Trading Day (t)

Following the Index Component Commencement Date, the Index Calculation Agent will calculate the closing level of the Portfolio Component according to the following formula:

$$PC_i(t) = UFPC_i(t) + FXH_i(t)$$

Where

$UFPC_i(t)$  Means the level of the i-th FX unhedged Portfolio Component on the Index Calculation Date (t) calculated according to the formula below

$FXH_i(t)$  Means the level of the i-th FX Hedge on the Index Calculation Date (t), calculated according to the formula below

$$FXH_i(t) = PC_i(r-1) \times EURUSD(r-1) \times \left[ \left( \frac{1}{EURUSDIM(r)} \right) - \left( \frac{1}{EURUSD(t)} \right) - \left( \frac{D-d}{D} \right) \times \left[ \left( \frac{1}{EURUSDIM(t)} \right) - \left( \frac{1}{EURUSD(t)} \right) \right] \right]$$

Where

$PC_i(r-1)$	Means the level of the i-th Portfolio Component on the Index Calculation Date immediately preceding the FX Forward Rolling Date (r) immediately preceding Index Calculation Date (t)
$EURUSD(r-1)$	Means the EURUSD Closing Level on the Index Calculation Date immediately preceding the FX Forward Rolling Date (r) immediately preceding Index Calculation Date (t)
$EURUSDIM(r)$	Means the EURUSD 1 month forward Closing Level on the FX Forward Rolling Date (r) immediately preceding Index Calculation Date (t)
D	Means the number of calendar days starting from, but not including, the FX Forward Rolling Date immediately preceding Index Calculation Date (t) up to and including the FX Forward Rolling Date following Index Calculation Date (t)
d	Means the number of calendar days starting from, but not including, the FX Forward Rolling Date immediately preceding Index Calculation Date (t) up to and including Frankfurt Trading Day (t)
$EURUSDIM(t)$	Means the Closing Level of the EURUSD 1 month forward on the Index Calculation Date (t)
$EURUSD(t)$	Means the Closing Level of EURUSD on the Trading Second of the Frankfurt Trading Day (t)

$$UFPC_i(t) = PC_i(r) \times \frac{UPC_i(t)}{UPC_i(r)} \times \frac{\frac{1}{EURUSD(t)}}{\frac{1}{EURUSD(r)}}$$

Where

$PC_i(r)$	Means the level of the i-th Portfolio Component on the FX Forward Rolling Date (r) immediately preceding the Index Calculation Date (t)
$UPC_i(r)$	Means the level of the i-th unhedged Portfolio Component on the FX Forward Rolling Date (r) immediately preceding the Index Calculation Date (t) as calculated by the formula below
$UPC_i(t)$	Means the level of the i-th unhedged Portfolio Component on the Index Calculation Date (t) as calculated by the formula below
$EURUSD(t)$	Means the Closing Level of EURUSD on the Index Calculation Date (t)
$EURUSD(r)$	Means the Closing Level of EURUSD on the FX Forward Rolling Date (r) immediately preceding Index Calculation Date (t)

$$UPC_i(t) = \begin{cases} UPC_i(t-1) \times \left( \frac{Proxy_i(t)}{Proxy_i(t-1)} - fee_i \times \frac{dc}{365} \right) & \text{if } t \leq \text{Underlying ETF Inception Date} \\ UPC_i(t-1) \times \left( \frac{ADJ_i(t)}{ADJ_i(t-1)} \right) & \text{otherwise} \end{cases}$$

Where

$UPC_i(t)$	Means the level of the i-th unhedged Portfolio Component on the Index Calculation Date (t)
$Proxy_i(t)$	Means the Closing Level of the Proxy Index of the i-th Component ETF on Index Calculation Date (t)
$fee_i$	Means the Expense Ratio of the i-th Component ETF



dc	Means the number of calendar days between the Index Calculation Date (t) and the Index Calculation Date immediately preceding (t)
ADJ <sub>i</sub> (t)	Means the level of the i-th Adjusted Component ETF as calculated on Index Calculation Date (t), according to the formula given below.

For each (i = 3, 4, 7, 8, 9, 10, 12 and 13), the Index Calculation Agent will calculate the Adjusted Component ETF level for each day where the NAV of this Component ETF is published following the Component ETF Inception Date.

$$ADJ_i(p) = \begin{cases} ETF_i(p) & \text{if } p = \text{Underlying ETF Inception Date} \\ ADJ_i(p-1) \times ETF_i(p) \times \frac{1 + \frac{(1 - tax_i(p)) \times div_i(p)}{ETF_i(p-1) - div_i(p)}}{ETF_i(p-1)} & \text{otherwise} \end{cases}$$

Where

ADJ <sub>i</sub> (p)	Means the level of the i-th adjusted Component ETF on the NAV Publication Date (p)
ETF <sub>i</sub> (p)	Means the ETF Closing Level of the i-th Component ETF on the NAV Publication Date (p) rounded to 3 decimal places
ADJ <sub>i</sub> (p – 1)	Means the level of the i-th adjusted Component ETF on the NAV Publication Date immediately preceding (p)
div <sub>i</sub> (p)	Means the dividend payment for the i-th Component ETF on the NAV Publication Date (p). If p is not an ex-date for a dividend payment, then div <sub>i</sub> (p) = 0
ETF <sub>i</sub> (p – 1)	Means the ETF Closing Level of the i-th Component ETF on the NAV on the NAV Publication Date immediately preceding (p) rounded to 3 decimal places
tax <sub>i</sub> (p)	Means the Withholding Tax Rate applicable to the dividend payment of the i-th Component ETF on NAV Publication Date (p). This depends on the Domicile of the Component ETF.

### Investment Portfolio Unit Weights Calculation

At each Index Rebalance Date (or Extraordinary Rebalance Date), the Index Calculation Agent will determine the unit weights of the Investment Portfolio within the Index. This uses the percentage exposure to the Investment Portfolio, which is calculated in attempt to reduce drawdown risk by allocating the rest of the exposure within the Index to the Cash Index

$$UW_{ip}(r) = PW_{ip}(s) \times \frac{Index(r)}{IP(r)}$$

Where

Index(r)	Means the Index Level on Index Rebalance Date (r)
UW <sub>ip</sub> (r)	Means the Unit Weight of the Investment Portfolio on the Index Rebalance Date (r) immediately preceding the Frankfurt Trading Day (t)
IP(r)	Means the level of the Investment Portfolio on the Index Rebalance Date (r)

$PW_{ip}(s)$  Means the percentage weight of the Investment Portfolio on Index Selection Date (s) as calculated by the rules below (see section "Investment Portfolio Percentage Weight Calculation")

#### Cash Index Unit Weight Calculation

$$UW_{cash}(r) = (1 - PW_{ip}(s)) \times \frac{Index(r)}{Cash(r)}$$

Where

Cash(r) Means the Cash Index Closing Level on the Index Rebalance Date (r)

#### Investment Portfolio Percentage Weight Calculation

$$PW_{ip}(s) = \min\left(100\%, \max\left(43\%, \text{Multiplier}(s) \times \frac{\text{Cushion}(s)}{Index(s)}\right)\right)$$

Where

Index(s) Means the Index Closing Level on Index Selection (or Extraordinary Selection) Date (s).

Cushion(s) Means the cushion between the Index Floor and the Index Level on Index Selection (or Extraordinary Selection) Date (s) as calculated by the formula below

Multiplier (s) Means the Investment Portfolio Multiplier, as calculated in Appendix 1: Weights Calculation on Index Selection (or Extraordinary Selection) Date (s)

$$\text{Cushion}(s) = \max(0, \text{Index}(s) - \text{Floor}(s))$$

Where

$$\text{Floor}(s) = \begin{cases} (1 - dd) \times \text{Index}(0) & \text{if } s \text{ is the first selection date} \\ (1 - dd) \times \max_{t=0}^{t=s}(\text{Index}(t)) & \text{if } dc < 120 \\ (1 - dd) \times \max_{t=s-119}^{t=s}(\text{Index}(t)) & \text{otherwise} \end{cases}$$

Where

dd Means the Drawdown Target, equal to 8%

dc Means the number of Index Calculation Dates between Index Commencement Date (t=0) and Index Selection Date (s)

Index(0) Means the Initial Index Level on Index Commencement Date, equal to 100 EUR

#### **4. Index Publication**

The Index Calculation Agent will publish the Index Intraday Level on Bloomberg ticker CBKIMVUI Index continuously during Frankfurt Trading Hours. In addition, for each Index Calculation Date, the Index Calculation Agent will publish the official Index Closing Level on Bloomberg ticker CBKIMVOE Index on the immediately following Index Calculation Date at or before midday London time.

## **5. Index Fees**

There are no Index Fees contained within this Index.

## **6. Additional Provisions relating to the Index**

In this section, the Component ETFs and the Cash Component ETFs are referred to collectively as the Index Component ETFs.

### **Suspension of the Calculation of the Index**

The Index Calculation Agent may suspend the calculation of the Index if on a Banking Day the ETF Closing Level of one or more Index Component ETFs is not determined (the "**Suspension of the Calculation of the Index**").

### **Extraordinary Index Adjustments**

Upon the occurrence of an Extraordinary Event in relation to an Index Component ETF included in the Index which has a material effect on the relevant Index Component ETF or the level of the Index Component ETF, the Index Sponsor shall make any such adjustments to the Index as are necessary to account for the economic effect of the Extraordinary Event on the Index and to preserve, to the extent possible, the economic profile that the Index had prior to the occurrence of the Extraordinary Event in accordance with the following provisions (each an "**Adjustment**"). The Index Sponsor shall decide in its reasonable discretion (*billiges Ermessen*) (§ 315 German Civil Code (BGB)) whether an Extraordinary Event has occurred and whether such Extraordinary Event has a material effect on the relevant Index Component ETF.

- (a) An Adjustment may result in
- (i) the Index Component ETF being replaced by an ETF (a "**Substitution ETF**") that (1) is denominated in the same currency as the Index Component ETF, (2) has the same or similar characteristics and features as the Fund and (3) has similar investment objectives and policies to those of the Fund immediately prior to the occurrence of the Extraordinary Event (a "**Substitution**").  
  
Any Substitution shall occur on the basis of the ETF Closing Level as of the Exchange Business Day immediately prior to the occurrence of the Extraordinary Event if the Extraordinary Event was announced at least 10 (ten) Exchange Business Days prior to such occurrence, and otherwise the ETF Closing Level as of the Exchange Business Day immediately subsequent to the occurrence of the Extraordinary Event (the "**Removal Value**");  
  
and/or
  - (ii) increases or decreases of specified variables and values in the calculation of the Index taking into account
    - (a) the effect of the Extraordinary Event on the level of the respective Index Component ETF;
    - (b) the diluting or concentrative effect of an Extraordinary Event on the theoretical value of the relevant Index Component ETF;
    - (c) the Removal Value or any fraction thereof in connection with a Substitution; or
    - (d) any cash compensation or other compensation in connection with a Replacement;and/or
  - (iii) consequential amendments to the provisions of the terms of the Index that are required to fully reflect the consequences of the Replacement.
- (b) Adjustments shall correspond to the adjustments to options or futures contracts relating to the relevant Index Component ETF made by the relevant Futures Exchange (a "**Futures Exchange Adjustment**").

- (i) If the Futures Exchange Adjustment results in the replacement of the Index Component ETF by a basket of ETF shares, the Index Sponsor shall be entitled to determine that only the ETF share with the highest market capitalisation on the Cut-off Date shall be the (replacement) Index Component ETF for the purpose of the Index, and to hypothetically sell the remaining ETF shares in the basket on the first Exchange Business Day following the Cut-off Date at the first available price and hypothetically reinvest the proceeds immediately afterwards in the (replacement) Index Component ETF by making an appropriate adjustment to the specified variables and values of the Index. If the determination of the share with the highest market capitalisation would result in an economic inappropriate Adjustment, the Index Sponsor shall be entitled to select any other ETF share of the basket of ETF shares to be the (replacement) Index Component ETF in accordance with the forgoing sentence. The Index Sponsor shall decide in its reasonable discretion (*billiges Ermessen*) (§ 315 German Civil Code (*BGB*)) whether this is the case.
- (ii) The Index Sponsor shall not be required to make adjustments to the Index by reference to Futures Exchange Adjustments, in cases where
  - (a) the Futures Exchange Adjustments would result in economically irrelevant adjustments to the Index; the Index Sponsor shall decide in its reasonable discretion (*billiges Ermessen*) (§ 315 German Civil Code (*BGB*)) whether this is the case;
  - (b) the Futures Exchange Adjustments violate the principles of good faith or would result in adjustments of the Index contrary to the principle to preserve the economic profile that the Index had prior to the occurrence of the Extraordinary Event and to compensate for the economic effect thereof on the level of the Index Component ETF; the Index Sponsor shall decide in its reasonable discretion (*billiges Ermessen*) (§ 315 German Civil Code (*BGB*)) whether this is the case; or
  - (c) in cases where no Futures Exchange Adjustment occurs but where such Futures Exchange Adjustment would be required pursuant to the adjustment rules of the Futures Exchange; in such case, the Index Sponsor shall decide in its reasonable discretion (*billiges Ermessen*) (§ 315 German Civil Code (*BGB*)) whether this is the case and shall make Adjustments in accordance with the adjustment rules of the Futures Exchange.
- (iii) In the event of any doubts regarding the application of the Futures Exchange Adjustment or adjustment rules of the Futures Exchange or where no Futures Exchange exists, the Index Sponsor shall make such adjustments to the Index which are required in its reasonable discretion (*billiges Ermessen*) (§ 315 German Civil Code (*BGB*)) to preserve the economic profile of the Index prior to the occurrence of the Extraordinary Event and to compensate for the economic effect thereof on the price of the Index Component ETF.
- (c) Any reference made to the Index Component ETF in this Index Description shall, if the context so admits, then refer to the replacement ETF share. All related definitions shall be deemed to be amended accordingly.
- (d) Adjustments shall take effect as from the date (the "**Cut-off Date**") determined by the Index Sponsor in its reasonable discretion (*billiges Ermessen*) (§ 315 German Civil Code (*BGB*)), provided that (if the Index Sponsor takes into consideration the manner in which adjustments are or would be made by the Futures Exchange) the Index Sponsor shall take into consideration the date at which such adjustments take effect or would take effect at the Futures Exchange.
- (e) Adjustments as well as their Cut-off Date shall be made available by the Index Calculation Agent in accordance with Section 4 – Index Publication.

**"Extraordinary Event"** with respect to an Index Component ETF means:

- (a) the implementation of any change to the terms and conditions of the Index Component ETF, which is of a material nature including but not limited to such changes as (i) a change in the risk profile of the Fund and/or the Index Component ETF; (ii) a change in the voting rights, if any, associated with the voting shares of the Index Component ETF; (iii) an alteration to the investment objectives of the Fund including the replacement of the Index Component ETF Index;

or (iv) a change in the currency in which the Index Component ETF are denominated so that the NAV is quoted in a different currency from that in which it was quoted on the Index Commencement Date. The Index Sponsor shall decide in its reasonable discretion (*billiges Ermessen*) (§ 315 German Civil Code (*BGB*)) whether such a change is of a material nature;

- (b) the breach of the investment objectives of the Index Component ETF (as defined in the Memorandum) if such breach is of a material nature. The Index Sponsor shall decide in its reasonable discretion (*billiges Ermessen*) (§ 315 German Civil Code (*BGB*)) whether this is the case;
- (c) the imposition or increase of subscription and/or redemption fees, or taxes or other similar fees, payable in respect of a purchase or redemption of the Index Component ETF after the Index Commencement Date;
- (d) if the Fund Management fails for reasons other than of a technical or operational nature, to calculate the NAV for ten consecutive Index Calculation Dates;
- (e) if the activities of the Index Component ETF and/or the Fund Management are placed under review by their regulators for reasons of wrongdoing, breach of any rule or regulation or other similar reason;
- (f) the Compulsory Redemption of the Index Component ETF by the Fund Management for any reason;
- (g) if the issue of additional shares of the Index Component ETF or the redemption of existing Index Component ETF is suspended
- (h) the winding-up or termination of the Index Component ETF for any reason;
- (i) if the Index Component ETF is superseded by a successor ETF (the "**Succession**") following a merger or similar event unless the Succession does not have any relevant economic effect on the Index. The Index Sponsor shall decide in its reasonable discretion (*billiges Ermessen*) (§ 315 German Civil Code (*BGB*)) whether this is the case;
- (j) the cancellation of the registration, or of the approval, of the Index Component ETF and/or the Fund Management by any relevant authority or body;
- (k) the replacement of the Fund Management, unless the relevant replacement is an individual or group of individuals who, or a corporate entity which, is reputable and experienced in their field. The Index Sponsor shall decide in its reasonable discretion (*billiges Ermessen*) (§ 315 German Civil Code (*BGB*)) whether this is the case;
- (l) the termination of the listing of the Index Component ETF on the Exchange due to a merger by absorption or by creation or due to any other reasons, or the becoming known of the intention of the Fund Company or the announcement of the Exchange that the listing of the Index Component ETF at the Exchange will terminate immediately or at a later date and that the Index Component ETF will not be admitted, traded or listed at any other exchange which is comparable to the Exchange (including the exchange segment, if applicable) immediately following the termination of the listing;
- (m) a procedure is introduced or ongoing pursuant to which the Index Component ETF or the substantial assets of the Fund Company are or are liable to be nationalized or expropriated or otherwise transferred to public agencies, authorities or organizations;
- (n) the application for insolvency proceedings or for comparable proceedings with regard to the assets of the Fund Company according to the applicable law of the Fund Company;
- (o) any change in the periodicity of the calculation or the publication of the NAV;
- (p) the cessation of the calculation and publication of the Index Component ETF Index by the Index Component ETF Index Sponsor; or
- (q) any other event in respect of the Index Component ETF being economically equivalent to the before-mentioned events with regard to their effects. The Index Sponsor shall decide in its

reasonable discretion (*billiges Ermessen*) (§ 315 German Civil Code (*BGB*)) whether this is the case.

### **Changes in the Calculation of the Index**

The Index Calculation Agent provides for the calculation of the Index on the Index Commencement Date in accordance with the Index calculation method and this Index Description. Although the Index Sponsor intends to apply this Index Description from the Index Commencement Date, it cannot be ruled out that tax, regulatory, statutory, economic or other circumstances might apply that, in the reasonable discretion (*billiges Ermessen*) (§ 315 German Civil Code (*BGB*)) of the Index Sponsor, will necessitate changes with regard to this Index Description. In that case, the Index Sponsor may in its reasonable discretion (*billiges Ermessen*) (§ 315 German Civil Code (*BGB*)) deviate from, or perform changes to, this Index Description. Any deviations from this Index Description are subject to the proviso that the general concept and, thus, the investment objectives of the Index in particular are maintained. In the event of a change to the calculation method as detailed in this Index Description, the Index Calculation Agent will publish the relevant change in accordance with Section 4 – Index Publication.

### **Corrections**

If the Index Calculation Agent identifies an error or omission in any of its calculations or determinations in respect of the Index, then the Index Calculation Agent may, if practicable and if the Index Calculation Agent determines acting in good faith that such correction, error or omission (as the case may be) is material, adjust or correct the relevant calculation or determination and/or the Index Level as of any Index Calculation Date to take into account such correction if the error or omission is less than ten calendar days old from the time of identification.

The Index Calculation Agent shall publish such correction in accordance with Section 4 – Index Publication.

### **Discontinuation of the Calculation of the Index**

If, in the case of any circumstances that require any changes to the Index as described in the section "Changes in the Calculation of the Index" above, or if, upon occurrence of an Extraordinary Event an Adjustment is not be possible while retaining the general concept and, thus, the objectives pursued by the Index, the Index Calculation Agent will discontinue the calculation of the Index (the "**Discontinuation of the Calculation of the Index**"). The Index Calculation Agent will decide in its reasonable discretion (*billiges Ermessen*) (§315 German Civil Code (*BGB*)) whether this is the case.

The Index Sponsor may also freely apply such Discontinuation of the Calculation of the Index in the case of a takeover-bid, i.e. an offer to take over or to swap or any other offer or any other act of an individual person or a legal entity that results in the individual person or legal entity buying, otherwise acquiring or obtaining a right to buy more than 10% of the outstanding shares of the Fund Company as a consequence of a conversion or otherwise; all as determined by the Index Sponsor based on notifications to the competent authorities or on other information determined as relevant by the Index Sponsor.

### **Index Disclaimer and Conditions of Use**

The Index Sponsor shall obtain information for inclusion in, or for use in the calculation of, the Index from sources that the Index Sponsor considers reliable. However, the Index Sponsor accepts no responsibility for, and shall have no liability for any errors, omissions or interruptions in respect of such sources or the information obtained therefrom. The Index Sponsor does not guarantee the accuracy and/or the completeness of the Index or any data included therein. The Index Sponsor makes no warranty, express or implied, as to the results to be obtained by any person or entity from the use of the Index or any data included therein. The Index Sponsor makes no express or implied warranties and expressly disclaims all conditions and warranties implied by statute, general law or custom with respect to the Index or any data included therein.

## **7. Index Specific Risks**

### **INDEX DESCRIPTION LIMITATIONS**

The performance of the Index is dependent on the pre-defined rules-based methodology set out in the Index Description. There is no assurance that other methodologies would not result in better performance than the methodology set out in the Index Description.

## DRAWDOWN RISK

The Index includes a mechanism to reduce the maximum drawdown risk. This is achieved by determining the percentage allocation in the Investment Portfolio and investing the remaining notional into the Cash Index. This mechanism only occurs on each Index Rebalance Date. If the Investment Portfolio experiences a drawdown in between Index Rebalance Dates, then the Index may experience a drawdown which is significantly higher than that of the maximum drawdown target.

## NEGATIVE EONIA RATE RISK

Depending on the Index Level, the historical volatility and historical return of the Investment Portfolio; the Index may have an allocation to the Cash Index. This Index is designed to reflect the performance of a cash balance which has been deposited overnight with the European Central Bank and is earning EONIA. If EONIA is negative, then the performance of the Cash Index allocation will be negative and thus will have a negative impact on the Index performance.

## CORRELATION RISK

The Index includes a weighting mechanism to combine notional long-positions in 13 Component ETFs across different asset classes. Historically, such portfolios have provided protection against drawdowns due to low pair-wise correlation amongst different asset classes. If there is an elevated level of correlation and these markets experience drawdown, then the Index will also experience a drawdown in value.

## EFFECT OF INDEX FEES

The Index Level includes a deduction of a notional Index Fee (as specified in Section 5). Investors in any product linked to the Index are advised to scrutinize and understand the impact of Index Fee as it will ultimately serve to act as a drag on the Index Level when levels of implied volatility in the equity markets are high and will restrict the return available (if any) under such product.

## FIXED ALGORITHMIC MODEL PARAMETERS

In common with all algorithmic strategies, the Index uses a rules-based methodology which contains fixed parameters. For example, the Index Rebalance Date is scheduled to occur on a specific day of every quarter. Furthermore, such monthly rebalancing of the Index is based on the covariance of the Component ETFs over a specific period of 120 Index Calculation Dates (or 20, in the case of an Extraordinary Index Rebalance). The Index methodology assumes that these parameters and other fixed parameters are reasonable in the context of the Index. However, alternative parameters could have a positive effect on the performance of the Index.

## LIMITED OPERATING HISTORY

The Index was launched by the Index Sponsor on the specified Index Launch Date and has been calculated by the Index Calculation Agent for the period from the specified Index Start Date. The Index Sponsor has published limited information about how the Index would have performed had it been calculated prior to the Index Launch Date. Due to the fact that the Index (and its Constituents) was each created relatively recently, and limited historical performance data exist with respect to it, an investment in a product linked to the Index may involve a greater risk than an investment in a financial product linked to one or more indices with a more established record of performance.

## Appendix (a): Calculation of Percentage Weights

### Section 1: Calculation of the Weights

There are two classes of rebalance. Index Rebalance Dates, which are the last Index Calculation Dates of February, May, August and November and whose corresponding Index Selection Dates occurs four Index Calculation Dates immediately preceding. There are also Extraordinary Index Rebalance Dates, which can occur when the Closing Level of the VIX Index, as published by the VIX Index Sponsor on the Extraordinary Selection Date is greater than or equal to 25%. This mechanism is designed to rebalance the Investment Portfolio when implied levels of market volatility are high. This means that the minimum number of rebalances per annum is four and the maximum number is twelve. If the Closing Level of the VIX Index is below 25% on the Extraordinary Selection Date, then there is no Extraordinary Index Rebalance Date for that calendar month.

In addition, the number of Index Calculation Dates used in the calculation of the percentage weights (“**Lookback Window**”) depends on the Closing Level of the VIX Index on each Index Selection Date. If it is greater than or equal to 25%, then the Lookback Window is 20. Otherwise, the Lookback Window is 120. This mechanism is designed to make the Index Rebalance more reliant on more recent historical behaviour of the Component ETFs when implied levels of market volatility are high. By design, the Lookback Window for each Extraordinary Index Selection Date is 20.

All of the formula below refer to Index Selection Dates, but refer also to Extraordinary Index Selection Dates.

The optimisation model takes as its input the average daily return of each Portfolio Component over the Lookback Window and the covariance matrix for the Portfolio Components. Mathematically, the optimisation problem is written as follows:

$$\operatorname{argmax}_w \left[ \mu^T w - \frac{\lambda}{2} w^T \Sigma w \right]$$

Subject to the following constraints on  $\{w_i\}$

- Additivity Constraint

$$\sum_{k=1}^{13} w_k = 1$$

- Positivity Constraint

$$w_k \geq 0 \quad \forall \quad k \in \{1, \dots, 13\}$$

- Western Equity Weighting Cap

$$\sum_{k=1}^3 w_k \leq 0.5$$

- Western Government Bonds Cap

$$\sum_{k=4}^6 w_k \leq 0.5$$

- Emerging Markets Cap

$$\sum_{k=7}^8 w_k \leq 0.25$$



- Corporate Bonds Cap

$$\sum_{k=9}^{11} w_k \leq 0.25$$

- Alternatives Cap

$$\sum_{k=12}^{13} w_k \leq 0.2$$

- Portfolio Components Cap

The Model Percentage Weight of each Portfolio Component is also capped according to the table given below.

Model Percentage Weight	Name	Component ETF	Asset Class	Weight Cap
$W_1$	iShares EURO STOXX 50 UCITS ETF	SX5EEX GY Equity	Western Equity	<b>0.19</b>
$W_2$	iShares Core FTSE 100 UCITS ETF	ISF LN Equity	Western Equity	<b>0.19</b>
$W_3$	iShares Core S&P 500 UCITS ETF	CSPX LN Equity	Western Equity	<b>0.19</b>
$W_4$	SPDR Barclays US Treasury Bond UCITS ETF	TRSY LN Equity	Western Treasury Bonds	<b>0.19</b>
$W_5$	iShares Core Euro Government Bond UCITS ETF	IEGA LN Equity	Western Treasury Bonds	<b>0.19</b>
$W_6$	iShares Core UK Gilts UCITS ETF	IGLT LN Equity	Western Treasury Bonds	<b>0.19</b>
$W_7$	iShares MSCI Emerging Markets UCITS ETF DIST	IDEM LN Equity	Emerging Markets	<b>0.15</b>
$W_8$	iShares JP Morgan \$ Emerging Markets Bond UCITS ETF	IEMB LN Equity	Emerging Markets	<b>0.15</b>
$W_9$	iShares \$ Corporate Bond UCITS ETF	LQDE LN Equity	Corporate Bonds	<b>0.15</b>
$W_{10}$	iShares USD High Yield Corporate Bond UCITS ETF	IHYU LN Equity	Corporate Bonds	<b>0.15</b>
$W_{11}$	iShares Core Euro Corporate Bond UCITS ETF	IEAC LN Equity	Corporate Bonds	<b>0.15</b>
$W_{12}$	iShares US Property Yield UCITS ETF	IDUP LN Equity	Alternative	<b>0.1</b>
$W_{13}$	ComStage ETF Commerzbank Commodity ex-Agriculture EW Index TR UCITS ETF	CBCOMM GY Equity	Alternative	<b>0.1</b>

Where

$w_k$  Means the Model Percentage Weight of the k-th Portfolio Component on Index Selection Date

$\lambda$  Means the Risk Aversion Factor, equal to 80.

$\mu$  Means the vector of average daily returns over the Lookback Window, as calculated by the formula below.

For each k, the average daily return for the Portfolio Component is calculated over the Lookback Window on each Index Selection Date

$$\mu_k = \frac{1}{LB} \sum_{l=s-LB}^{l=s-1} \left( \frac{PC_k(l+1)}{PC_k(l)} - 1 \right)$$

Where

$PC_k(l)$  Means the level of the k-th Portfolio Component on the l-th Index Calculation Date

LB Means the Lookback Window, determined according to the formula below.

On each Index Selection Date (s), a 13 by 13 covariance matrix "  $\Sigma$  " is constructed where each each (i,j) component of the matrix is determined as follows:

$$\Sigma_{i,j} = \text{cov}(PC_i(s), PC_j(s))$$

$$1 \leq i \leq 13; 1 \leq j \leq 13$$

And

$$\text{cov}(PC_i(s), PC_j(s)) = \frac{1}{(LB-1)} \sum_{k=0}^{LB} \left( \left( \frac{PC_i(s-k)}{PC_i(s-(k+1))} - 1 \right) - \mu_i \right) \left( \left( \frac{PC_j(s-k)}{PC_j(s-k-1)} - 1 \right) - \mu_j \right)$$

Where:

$\text{cov}(PC_i(s), PC_j(s))$  Means the covariance between the time series of returns of Portfolio Component (i) (where i equals, 1,2,3...13) and Portfolio Component (j) (where j equals, 1,2,3 or 13) measured over the Lookback Window up to and including Index Selection Date (s)

The vector of average daily returns  $\mu_i$  and  $\mu_j$  over the Lookback Window is calculated as above

$$LB = \begin{cases} 120 & \text{if } VIX(s) < 25\% \\ 20 & \text{if otherwise} \end{cases}$$

Where

VIX (s) Means the Closing Level of the VIX Index on Index Selection Date (s)

The solution to this optimisation problem is a vector of weights, which are set to be the Model Percentage Weights. These are used to determine the Unit Weights for each Portfolio Component as detailed in Section 3.

$$w_k = MPW_k(s)$$

## **Section 2: Calculation of the Multiplier**

As mentioned in Section 3 of the Index Description ("**Index Calculation**"), the percentage weight allocated to the Investment Portfolio is designed to reduce the drawdown risk of the Index Level. Drawdown, the percentage of loss from a previous peak Index Level, is an important risk consideration for the Investors. Formulaically, this is calculated by the Index Calculation Agent on each Index Selection Date:

$$PW_{ip}(s) = \min \left( 100\%, \max \left( 43\%, \text{Multiplier}(s) \times \frac{\text{Cushion}(s)}{\text{Index}(s)} \right) \right)$$

Where

Index(s)	Means the Index Level on Index Selection Date (s)
Cushion(s)	Means the cushion between the Index Floor and the Index Level on Index Selection (or Extraordinary Selection) Date (s)
Multiplier(s)	Means the Investment Portfolio multiplier on Index Selection Date (s), as calculated below

The drawdown control mechanism ideally helps to reduce drawdown risk while at the same time maximizing the Index's long-term growth rate. The multiplier (the "**Investment Portfolio Multiplier**"), used in the calculation of the percentage weight of the Investment Portfolio within the Index, is designed to do this. Here, the cushion is increased when the hypothetical Investment Portfolio return, as measured over the Lookback Window, is higher and the hypothetical portfolio variance is lower. This means that the percentage allocated to the Investment Portfolio will be increased, capped at 100%. It is calculated according to the formula below:

$$\text{Multiplier}(s) = \left[ \frac{\sum_{k=1}^{13} \text{MPW}_k(s) \times \left[ \mu_k - \frac{\kappa}{2} \times \sigma_k(s) \right]}{\text{MPW}(s)^T \Sigma \text{MPW}(s)} \right] \times \left[ \frac{1}{1 - \text{dd}^2} \right]$$

Where:

$\kappa$	Means the Risk Aversion Factor, equal to 5.
$\mu_k$	Means the average daily return of the k-th Portfolio Component as measured over the Drawdown Window
$\text{MPW}(s)$	Means the vector of the 13 Model Percentage Weights, as determined in the optimisation.
$\Sigma$	Means the covariance matrix of daily returns over the Lookback Window for the 13 Portfolio Components
$\sigma_k(s)$	Means the variance of the k-th Portfolio Component on the Index Selection Date (s) as calculated over the Lookback Window according to the formula below
$\text{MPW}_k(s)$	Means the Model Percentage Weights of the k-th Portfolio Component, as determined in the optimisation.
dd	Means the Drawdown Target, equal to 8%.

$$\sigma_k(s) = \text{cov}(PC_i(s), PC_i(s)) = \frac{1}{(LB - 1)} \sum_{k=0}^{LB} \left( \left( \frac{PC_i(s - k)}{PK_i(s - (k + 1))} - 1 \right) - \mu_i \right)^2$$

Where:

$PC_i(s - k)$	Means the level of the i-th Portfolio Component on (k) Index Calculation Dates preceding Index Selection Date (s)
$PC_i(s - k - 1)$	Means the level of the i-th Portfolio Component on (k+1) Index Calculation Dates preceding Index Selection Date (s)

$\mu_i$	Means the average daily return of the i-th Portfolio Component as measured over the Drawdown Window
LB	Means the Lookback Window.