Munich RE

INDEX HANDBOOK

FIVE Pension Risk Control 5% ER (EUR) Index

FIVE

Munich RE

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Version history

#1	1 August 2025	Index launch and document release

1. Overview

The FIVE PENSION RC 5% ER (EUR) Index (the "**FIVE Pension Index**" or the "**Index**") is a risk controlled excess return index denominated in EUR. The Index is comprised of 2 sub-indices (the "**Sub-Indices**"). The first Sub-Index (the "**FIVE World Equity Index**" or the "**Equity Index**") represents an equity beta investment strategy by implementing a long-only fixed-proportion investment strategy in a variety of global equity markets. The second Sub-Index (the "**FIVE Global Macro Index**" or the "**Global Macro Index**") represents a liquid alternative beta investment strategy by combining two momentum-based and two carry-based dynamic investment strategies.

"**Index Calculation Days**" are all weekdays except Munich[1] holidays. In case of a holiday on a relevant exchange which is not a Munich holiday, the stale price from the prior available **"Index Business Day"** is used for the respective constituent and the price of the Index is indicative. Index Business Days are all Index Calculation Days, on which all underlying instrument markets are fully open for business. ***In the case a contract payoff is linked to the Index, the related contract is only tradable on Index Business Days. On all remaining Index Calculation Days, the level of the Index is published for information purposes only*.**

The value of the Index is calculated on each Index Calculation Day t and shall reflect constituent futures prices as of APAC market close[2]. Hence, for non-APAC listed index constituents, the futures price as of Index Calculation Day t is actually the settlement price of the relevant futures exchange as of the respective previous Futures Trading Day.

The Index is administered, calculated and published by the Index Administrator, as defined below, under the Regulation (EU) 2016/1011 (the "Benchmark Regulation" or "BMR").

The "**Index Live Date**", which is the date the Index Administrator began calculating the Index and will be recorded in accordance with Article 8 of the BMR, is 01 August 2025. The Index time series starts on 4 January 1999; the calculation of the Top-Level Index has been initiated on 2 February 1999 and the Sub-Index time series began as of 2 January 1998 (each of these date the "**Index Start Date**"). The Index starts with an initial value of 100 EUR on its Index Live Date.

The level of the Index, as determined by the Index Administrator in its function as Calculation Agent, will be published on Bloomberg via the page **VPREX5 <Index>**, or on any successor financial information service as defined at the sole discretion of the Index Administrator.

2. Index Calculation

This sections explains how the FIVE Pension Index and all included sub-indices are calculated.

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[1] New Year's Day, Epiphany, Shrove Tuesday, Good Friday, Easter Monday, Labour Day, Ascension Day, Whit Monday, Corpus Christi Day, Assumption Day, Day of German Unity, All Saints' Day, Christmas Eve, Christmas Day, Christmas Holiday (St. Stephen's Day), New Year's Eve.

[2] Cut-off time: 8.30 CET

2.1 Index Structure

The FIVE Pension Index combines its two Sub-Indices into one portfolio. Furthermore, the Index applies a target volatility overlay strategy for risk management purposes to this portfolio.

While the FIVE World Equity Index consists of a portfolio of global equity index futures, the FIVE Global Macro Index is an aggregation of different alternative risk premia investment strategies.

Figure 1: Structure "FIVE Pension Index"

The Index Handbook starts with the description of FIVE Pension Index. Afterwards, the FIVE World Equity Index and the FIVE Global Macro Index (including its four liquid alternative beta strategy indices: TSMOM = time-series momentum, TSCAR = time-series carry, XSMOM = cross-sectional carry, XSCAR = cross-sectional carry) are explained.

2.2 Index Composition

The table below lists all individual markets used in the Index and its Strategy Indices. The last five columns express which markets are used in each Strategy Index (Y: yes, N: no).

# MARKET	ASSET CLASS	FUTURES MARKET	TICKER PREFIX[3]	TICKER EXTENSION[4]	FX[5] RATE	TC IN NB TICKS	BETA	TSMOM	XSMOM	TSCAR	XSCAR
#1	CO	NYMEX WTI Light Sweet Crude Oil	CL	Comdty	USD/EUR	1	N	Y	Y	Y	Y
#2	CO	ICE Brent Crude	CO	Comdty	USD/EUR	1	N	Y	Y	Y	Y
#3	CO	COMEX Gold	GC	Comdty	USD/EUR	1	N	Y	Y	Y	Y
#4	CO	COMEX Copper	HG	Comdty	USD/EUR	2	N	Y	Y	Y	Y
#5	CO	NYMEX NY Harbor ULSD	HO	Comdty	USD/EUR	2	N	Y	Y	Y	Y
#6	CO	NYMEX Natural Gas	NG	Comdty	USD/EUR	2	N	Y	Y	Y	Y
#7	CO	NYMEX Platinum	PL	Comdty	USD/EUR	2	N	Y	Y	Y	Y
#8	CO	ICE Low Sulphur Gasoil	QS	Comdty	USD/EUR	2	N	Y	Y	Y	Y
#9	CO	COMEX Silver	SI	Comdty	USD/EUR	2	N	Y	Y	Y	Y
#10	CO	NYMEX RBOB Gasoline	XB	Comdty	USD/EUR	2	N	Y	Y	Y	Y
#11	EQ	Euronext CAC 40	CF	Index	1	2	N	Y	Y	Y	Y
#12	EQ	CME E-mini DJIA	DM	Index	USD/EUR	1	N	Y	Y	N	N
#13	EQ	CME E-mini S&P 500	ES	Index	USD/EUR	1	Y	Y	Y	Y	Y
#14	EQ	CME E-mini S&P MidCap 400	FA	Index	USD/EUR	2	Y	Y	Y	Y	Y

[3] Ticker as currently available on the market information service by Bloomberg L.P.

[4] Ticker as currently available on the market information service by Bloomberg L.P.

[5] FX = Foreign Exchange

#15	EQ	Eurex DAX	GX	Index	1	1	N	Y	Y	Y	Y
#16	EQ	HKFE HSCEI	HC	Index	HKD/EUR	2	Y	N	N	N	N
#17	EQ	HKFE Hang Seng	HI	Index	HKD/EUR	1	N	Y	Y	Y	Y
#18	EQ	CME E-mini NASDAQ-100	NQ	Index	USD/EUR	1	Y	Y	Y	N	N
#19	EQ	MX S&P/TSX 60	PT	Index	CAD/EUR	2	Y	N	N	N	N
#20	EQ	CME E-mini Russell 2000	RTY	Index	USD/EUR	2	N	Y	Y	Y	Y
#21	EQ	Eurex SMI	SM	Index	CHF/EUR	2	N	Y	Y	Y	Y
#22	EQ	Eurex STOXX Europe 600	SXO	Index	1	1	Y	N	N	N	N
#23	EQ	OSE Topix	TP	Index	JPY/EUR	1	Y	Y	Y	Y	Y
#24	EQ	Eurex EURO STOXX 50	VG	Index	1	1	N	Y	Y	Y	Y
#25	EQ	ICE FTSE 100	Z	Index	GBP/EUR	1	N	Y	Y	Y	Y
#26	FI	MX 10Y CGB	CN	Comdty	CAD/EUR	2	N	Y	Y	Y	Y
#27	FI	ICE Long Gilt	G	Comdty	GBP/EUR	1	N	Y	Y	Y	Y
#28	FI	OSE 10Y JGB	JB	Comdty	JPY/EUR	1	N	Y	Y	Y	Y
#29	FI	Eurex Euro-BTP	IK	Comdty	1	2	N	Y	Y	Y	Y
#30	FI	Eurex Euro-OAT	OAT	Comdty	1	1	N	Y	Y	Y	Y
#31	FI	Eurex Euro-Bund	RX	Comdty	1	1	N	Y	Y	Y	Y
#32	FI	CBOT 10Y US T-Note	TY	Comdty	USD/EUR	1	N	Y	Y	Y	Y

#33	FI	Eurex Euro-Buxl	UB	Comdty	1	2	N	Y	Y	N	N
#34	FI	CBOT 30Y US T-Bond	US	Comdty	USD/EUR	1	N	Y	Y	N	N
#35	FX	CME AUD/USD	AD	Curncy	USD/EUR	2	N	Y	Y	Y	Y
#36	FX	CME GBP/USD	BP	Curncy	USD/EUR	2	N	Y	Y	Y	Y
#37	FX	CME CAD/USD	CD	Curncy	USD/EUR	2	N	Y	Y	Y	Y
#38	FX	CME EUR/USD	EC	Curncy	USD/EUR	1	N	Y	Y	Y	Y
#39	FX	CME JPY/USD	JY	Curncy	USD/EUR	1	N	Y	Y	Y	Y
#40	FX	CME NOK/USD	NO	Curncy	USD/EUR	2	N	Y	Y	Y	Y
#41	FX	CME NZD/USD	NV	Curncy	USD/EUR	2	N	Y	Y	Y	Y
#42	FX	CME SEK/USD	SE	Curncy	USD/EUR	2	N	Y	Y	Y	Y
#43	FX	CME CHF/USD	SF	Curncy	USD/EUR	2	N	Y	Y	Y	Y

Table 1: Investment universe

Futures Roll Indices

All Index components are Futures Roll Indices. A Futures Roll Index maintains a continuous futures position in the **Active Contract**[6] by rolling from the **Front Contract**[7] into the **Next Contract**[8]. This standard futures roll occurs two Index Business Days prior to the futures contract's last trading day or first notice date, respectively.

Each Futures Roll Index starts at a value of 100 and is denominated in the currency of the underlying futures. Daily settlement prices of the relevant futures contracts are used to calculate the index levels on a daily basis.

[6] Active Contract: The futures contract currently held and traded, typically the front contract until it is rolled into the next contract before expiry.

[7] Front contract: Futures contract with the nearest expiration date currently traded.

[8] Next contract: Futures contract expiring immediately after the front contract.

2.3 FIVE Pension Index

The FIVE Pension Index combines the two Sub-Indices – the FIVE World Equity Index and the FIVE Global Macro Index – using notional weights of 60% and 40%, respectively. This portfolio is rebalanced and reweighted on a monthly basis. Additionally, a risk control overlay is applied and updated daily. Each Sub-Index also incorporates its own individual risk control mechanism.

# SUB-INDEX	SUB-INDEX NAME	CURRENCY	INDEX TYPE	WEIGHT
#1	FIVE World Equity Index (VWRLDEQT)	EUR	Excess Return	60%
#2	FIVE Global Macro Index (GLBLMCRO)	EUR	Excess Return	40%

Table 2: Sub-Indices "FIVE Pension Index"

While the FIVE World Equity Index is a fixed-proportion portfolio composed of global blue-chip equity index markets, the FIVE Global Macro Index consists of four distinct liquid alternative beta investment strategies. For all these indices, rebalancing is conducted at the beginning of each calendar month. All non-EUR components are subject to a daily FX hedge. Transaction costs are applied on a per-trade basis for each individual market; that is, every weight change incurs transaction costs[9] as specified in Table 1.

The FIVE Pension Index targets an annualized volatility of 5%. The theoretical leverage is capped at a factor of 2, applied globally and monitored on a look-through basis across all index components. Volatility is managed using an EWMA-based estimator with a lambda of 0.98, selecting the higher of two estimates calculated over 19 and 89 return observations, respectively.

2.4 Sub-Index 1: FIVE World Equity Index

An investment in equity markets offers participation in the long-term growth of economies and compensation for bearing market risk. Through this, investors participate in the equity risk premium – the excess return earned for accepting the higher risk of equities compared to risk-free assets.

The FIVE World Equity Index aims to track global developed equity markets while maintaining a stable volatility profile over time. It combines several blue-chip equity indices into a single, long-only portfolio with fixed target allocations, as outlined in Table 1. Rebalancing and reweighting are performed monthly, at the beginning of each calendar month. All non-EUR components are subject to a daily FX hedge.

[9] Transaction costs for futures markets are expressed in number of ticks. One tick represents the minimum price increment of a futures contract. Each tick has a defined tick value, which can be compared to the contract value for a relative cost perspective. For example, a tick value of 10 EUR on a contract valued at 100,000 EUR corresponds to a relative cost of 0.01% per tick.

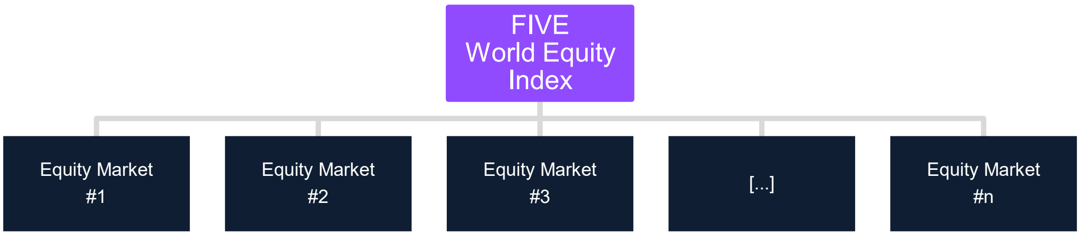

Figure 2: Structure "FIVE World Equity Index"

The FIVE World Equity Index targets an annualized volatility of 5%, with a theoretical maximum leverage of 1 (i.e., only de-leveraging may occur). An EWMA based volatility estimator is used to realize the aforementioned volatility level, where lambda equals 0.98 and either uses 19 or 89 return observations, whichever measures the higher volatility.

# MARKET[10]	FUTURES MARKET	TICKER PREFIX[ii]	TICKER EXTENSION[11]	% NOTIONAL WEIGHT
#13	CME E-mini S&P 500	ES	Index	30%
#14	CME E-mini S&P MidCap 400	FA	Index	15%
#16	HKFE HSCEI	HC	Index	5%
#18	CME E-mini NASDAQ-100	NQ	Index	10%
#19	MX S&P/TSX 60	PT	Index	5%
#22	Eurex STOXX Europe 600	SXO	Index	25%
#23	OSE Topix	TP	Index	10%

Table 3: Allocation "FIVE World Equity Index"

[10] See Table 1.

[11] Ticker as currently available on the market information service by Bloomberg L.P.

2.5 Sub-Index 2: FIVE Global Macro Index

Systematic Global Macro refers to a rules-based investment approach that seeks to capture macroeconomic trends and risk premia across global asset classes. The strategy systematically applies time-series and cross-sectional momentum and carry signals across equity indices, government bonds, commodities (energy and metals), and G10 currencies, using highly liquid futures. It aims to exploit both directional and relative value opportunities driven by macroeconomic dynamics, within a diversified and risk-controlled framework.

The FIVE Global Macro Index (the **"Global Macro Index"**) tracks a basket of four long/short liquid alternative beta investment strategies (each a "**Global Macro Sub-Index**") while targeting a stable volatility level over time.

# SUB-INDEX	GLOBAL MACRO SUB-INDEX NAME	RETURN TYPE	CURRENCY	Target Volatility
#1	TSMOM Strategy Sub-Index (GMATSMOM)	Excess Return	EUR	5%
#2	TSCAR Strategy Sub-Index (GMATSCAR)	Excess Return	EUR	5%
#3	XSMOM Strategy Sub-Index (GMAXSMOM)	Excess Return	EUR	5%
#4	XSCAR Strategy Sub-Index (GMAXSCAR)	Excess Return	EUR	5%

Table 4: Sub-Indices "FIVE Global Macro Index"

The four Global Macro Sub-Indices are risk-controlled long/short portfolios, of which two are based on momentum signals and two on carry signals. Each signal type is implemented using both a time-series and a cross-sectional approach. The resulting Global Macro Sub-Indices are:

- Time-series momentum ("TSMOM"),
- Time-series carry ("TSCAR"),
- Cross-sectional momentum ("XSMOM"),
- Cross-sectional carry ("XSCAR").

The Global Macro Sub-Indices are equally weighted, with allocations implemented as part of the monthly rebalancing process. Portfolio rebalancing — including both reweighting and repositioning — takes place on the first Index Business Day of each calendar month, provided that all Index Components are open for trading. If this is not the case, the previous Index Business Day meeting this condition is used.

Rebalancing triggered by the overlaid risk control mechanism may occur on a daily basis. All non-EUR components are subject to a daily FX hedge.

Figure 3: Structure "FIVE Global Macro Index"

The FIVE Global Macro Index is risk-controlled and targets an annualized volatility of 5%. The theoretical leverage is capped at a factor of 4. An EWMA-based volatility estimator is used to target this volatility level, with a lambda of 0.98 and either 19 or 89 return observations, depending on which produces the higher volatility estimate.

Each Global Macro Sub-Index is also risk-controlled and targets an annualized volatility of 5%, employing a volatility targeting mechanism equivalent to that of the FIVE Global Macro Index. The theoretical leverage for the Sub-Indices is capped at a factor of 5.

2.5.1 Metric Definitions

The following sections define the momentum and carry metrics used to generate systematic signals across a diversified multi-asset investment universe. Momentum is derived from historical excess returns and is applied uniformly. Carry requires asset-class-specific inputs, though its conceptual framework is consistent across asset classes.

2.5.1.1 Momentum

Definition

Price momentum is defined as the past excess performance of a market over a specified period. The applied lookback periods are 3, 6, 9, and 12 months. Local Exchange Futures Roll Indices ("LEFRIs") are used to calculate price momentum. Risk-adjusted momentum is defined as the ratio of price momentum to the asset's annualized volatility (measured as standard deviation) over the respective lookback period.

Local Exchange Futures Roll Indices

A Local Exchange Futures Roll Index ("LEFRI") represents a futures position that is continuously rolled into the active contract according to the holiday calendar of the respective futures exchange. LEFRIs are calculated for all relevant futures markets within the investment universe.

2.5.1.2 Carry

Definition

Carry, or Carry Yield, is defined as the expected return of an asset assuming its price remains unchanged. By using the term structure of futures curves, a universal definition of carry can be derived across different asset classes. Depending on the main price drivers (spot and futures) in each asset class, simplified proxies for the Carry Yield are used.

A generalized, cross-asset approach to calculating Carry Yield for futures markets can be applied, provided that the markets are sufficiently liquid across multiple maturities. When this liquidity condition is met, carry signals are derived by analyzing the shape of the futures market's term structure. To account for differing risk levels, carry signals are adjusted for volatility.

A negative slope of the term structure corresponds to a positive Carry Yield, while a positive slope implies a negative Carry Yield. The specific input variables used to calculate Carry Yield differ between asset classes.

Commodities

In order to be able to calculate a standardized set of carry signals for commodity futures, **Constant Maturity Futures Indices** (each a **"CMFI"**) are introduced. Commodity futures term structures are typically sufficiently liquid to be able to perform this task. For the purpose of deriving a carry value for a commodities futures market, a longer-term CMFI with a constant maturity of 13 months and a shorter-term CMFI with a constant maturity of 1 month is calculated using the two nearest neighboring live futures contract (listed on the respective derivatives exchange) around the respective CMFI maturity date on the considered day.

The standardization is achieved by fitting the weight of the futures contract having nearest shorter maturity date and the weight of the futures contract having the nearest longer maturity date such that the combined time to maturity is identical to the CMFI term, and the combined weighted price yields the CMFI level.

In the next step, the Carry Yield for the respective commodities market can be determined by using the ratio of the 13 months CMFI and the 1 month CMFI.

Equity Indices

Carry for equity indices is proxied using 12-month forward dividend estimates and corresponding 12-month interest rates. Since equity index futures markets typically exhibit sufficient liquidity only in the front contract, a direct carry calculation from the futures curve is not feasible.

Instead, the Carry Yield proxy for an individual equity index is derived by subtracting an appropriate 1-year funding rate in the index currency from the aggregated analyst dividend yield estimates over a one-year forward-looking period. This approach assumes that dividends and funding costs are the primary drivers shaping the equity index futures curve.

Fixed Income

Fixed income carry is proxied using the slope of the relevant yield curve plus its roll-down effect. Since government bond futures markets typically exhibit liquidity only in the front contract, a direct Carry Yield calculation from the futures curve is not possible.

The slope is measured as the duration-adjusted difference between the long-term (10-year) government bond yield and the short-term (3-month) yield. The roll-down is defined as the duration-adjusted difference between the long-term (10-year) and medium-term (5-year) government bond yields.

The total fixed income carry is derived by summing the slope and roll-down components, assuming these are the key drivers shaping the government bond futures curve.

Foreign Exchange

For FX carry, FX spot and forward levels are necessary for the currency pairs considered. After standardizing all FX inputs (FX spot and FX forward points) to reflect a uniform quotation convention — American terms, with USD as the base currency — comparable carry levels can be derived.

The proxy used for FX carry is defined as the ratio of FX spot to FX forward level (3-month forwards).

2.5.2 TSMOM Strategy Sub-Index

The TSMOM Strategy Sub-Index consists of four sub-indices implementing a time-series momentum ("TSMOM") investment approach.

These sub-indices are called **Asset Class Sub-Indices** (**"ACSI"**) as each covers a different investment universe according to its asset class: Commodities, Equity, Fixed Income, and FX.

Each ACSI is further subdivided into four **Trend Strategy Sub-Indices** (**"TSSI"**), which capture the univariate trend behavior of the respective assets using different momentum lookback periods.

Trend Strategy Sub-Indices ("TSSIs")

Each ACSI comprises four TSSIs, with their asset universe defined by the asset class.

Step 1: Classification into Long or Short Positions
On each Rebalancing Day, the price momentum of each market is evaluated within each TSSI. A positive momentum results in a long position in the respective futures market, a negative momentum triggers a short position, and if momentum is zero, the position weight is set to zero.

Step 2: Weight Determination
Also on the Rebalancing Day, the notional weights of the Index Components are reset so that each position contributes equally to the overall risk of the ACSI. Risk is measured as the standard deviation of daily log-returns over the past 90 Index Business Days. Weights are rounded to four decimal places and converted into the corresponding number of futures contracts, which remain fixed until the next monthly Rebalancing Day.

Asset Class Sub-Indices ("ACSIs")

Each ACSI aggregates its four TSSIs into one portfolio. The TSSIs are weighted inversely proportional to their volatility, and these weightings are implemented during the monthly rebalancing process. The portfolio holds a number of units of each TSSI, calculated based on their notional percentage weights.

The ACSI's daily value is the sum of the daily EUR profit and loss figures of the four TSSIs. These Profit and loss figures are derived from the daily EUR profit and loss of the relevant Futures Roll Indices within each asset class portfolio. If a Futures Roll Index is denominated in a currency other than EUR, its daily Profit and loss is converted into EUR.

Calculation of the TSMOM Strategy Sub-Index

The TSMOM Strategy Sub-Index aggregates its four ACSIs into one portfolio. The ACSIs are weighted inversely proportional to their volatility, and these weightings are implemented during the monthly rebalancing process. The portfolio holds a number of units of each ACSI, calculated based on their notional percentage weights.

The daily value of the TSMOM Strategy Sub-Index is the sum of the daily EUR Profit and loss of the four ACSIs. These are derived from the daily EUR Profit and loss of all relevant Futures Roll Indices within the asset class portfolios. Futures Roll Index daily Profit and loss is converted into EUR if not originally denominated in EUR.

2.5.3 TSCAR Strategy Sub-Index

The TSCAR Strategy Sub-Index is comprised of 4 strategy Sub-Indices, implementing an investment strategy based on time-series carry (“TSCAR”) in the respective asset class.

The strategy sub-indices are named Asset Class Sub-Indices (“ACSI”), as these are using different investment universes depending on their asset class membership; there is a Commodity, an Equity, a Fixed Income and an FX Sub-Index.

Asset Class Sub-Indices (“ACSIs”)

All relevant Carry Yields are determined on each Rebalancing Day of the Index. Afterwards, these results are translated into long, short or flat positions for each ACSI and its components.

Step 1: Classification into Long or Short Positions
Within each ACSI, the Carry Yield of each market is checked. A positive Carry Yield results in a long position in the respective futures market, a negative Carry Yield results in a short position, and zero Carry Yield results in a flat (zero) position.

Step 2: Weight Determination
On the Rebalancing Day, the notional percentage weights of the Index Components are reset so that all positions in the respective ACSI contribute equally to the ACSI’s total risk. Risk is measured as the standard deviation of daily log-returns over the past 90 Index Business Days. The weights are rounded to four decimal places and converted into the corresponding number of futures contracts, which remain fixed until the next monthly Rebalancing Day.

Calculation of the TSCAR Strategy Sub-Index

The TSCAR Strategy Sub-Index aggregates its four ACSIs into one portfolio. The ACSIs are weighted inversely proportional to their volatility, with these weightings implemented during the monthly rebalancing process. The TSCAR Strategy Sub-Index consists of a number of units of each ACSI, calculated using the ACSIs’ notional percentage weights.

The daily EUR Profit and loss of the TSCAR Strategy Sub-Index is the sum of the daily EUR Profit and loss figures of the four ACSIs. These figures are derived from the daily EUR Profit and loss of all relevant Futures Roll Indices within the asset class portfolios. Futures Roll Index daily Profit and loss is converted into EUR if not originally denominated in EUR.

2.5.4 XSMOM Strategy Sub-Index

The XSMOM Strategy Strategy Sub-Index consists of four sub-indices implementing a cross-sectional momentum ("XSMOM") investment approach.

The sub-indices are named Asset Class Sub-Indices ("ACSI"), as they use different investment universes depending on their asset class membership: Commodity, Equity, Fixed Income, and FX Sub-Indices.

Each ACSI is composed of four Trend Strategy Sub-Indices ("TSSI"). The trend strategies in this index are based on time-series momentum, considering the univariate trend behavior of the respective assets. TSSIs use the same asset class universe but differ by the lookback period used in the momentum metric.

Trend Strategy Sub-Indices ("TSSIs")

Each ACSI contains four TSSIs, whose asset universe is determined by its asset class. On each Rebalancing Day, all relevant risk-adjusted momentum metrics are calculated for each asset. Afterwards, these results are translated into long, short or flat positions for each TSSI and its components.

Step 1: Ranking and Classification into Long or Short Positions
Assets within each TSSI are ranked by their price momentum, with the highest momentum asset receiving the top rank and the lowest momentum asset the bottom rank. The asset universe is split at the median rank into two equal groups (if the number of assets is uneven, one asset may be excluded). All assets in the top half are assigned long positions, and all assets in the bottom half are assigned short positions until the next Rebalancing Day.

Step 2: Weight Determination
On the Rebalancing Day, the notional percentage weights of the Index Components are reset so that all positions within each TSSI contribute equally to the total risk of the TSSI. Risk is measured as the standard deviation of daily log-returns over the past 90 Index Business Days. Weights are rounded to four decimal places and converted into futures contract quantities fixed until the next monthly Rebalancing Day.

Asset Class Sub-Indices ("ACSIs")

Each ACSI aggregates its four TSSIs into one portfolio. The TSSIs are weighted inversely proportional to their volatility, and these weightings are implemented during the monthly rebalancing process.

Each ACSI consists of a certain number of units of each TSSI, calculated using the TSSIs' notional percentage weights.

The daily EUR Profit and loss of each ACSI is the sum of the daily EUR Profit and loss figures of the four TSSIs. These figures derive from the daily EUR profit and loss of all relevant Futures Roll Indices within the asset class portfolios. Futures Roll Index daily profit and loss is converted into EUR if not originally denominated in EUR.

Calculation of the XSMOM Strategy Sub-Index

The XSMOM Strategy Sub-Index aggregates its four ACSIs into one portfolio. The ACSIs are weighted inversely proportional to their volatility, with these weightings applied during the monthly rebalancing process.

The XSMOM Strategy Sub-Index consists of a number of units of each ACSI, calculated using the ACSIs' notional percentage weights.

The daily EUR profit and loss of the XSMOM Strategy Sub-Index is the sum of the daily EUR profit and loss figures of the four ACSIs. Futures Roll Index daily profit and loss is converted into EUR if not originally denominated in EUR.

2.5.5 XSCAR Strategy Sub-Index

The XSCAR Strategy Sub-Index consists of four sub-indices implementing a cross-sectional carry ("XSCAR") investment approach across different asset classes.

These sub-indices are called Asset Class Sub-Indices ("ACSI") because they use different investment universes depending on their asset class membership: Commodities, Equity, Fixed Income, and FX Sub-Indices.

Asset Class Sub-Indices ("ACSIs")

All relevant Carry Yields are determined on each Rebalancing Day of the Index. Afterwards, these results are translated into long, short, or flat positions for each ACSI and its components.

Step 1: Ranking and Classification into Long or Short Positions
Assets in each ACSI are ranked by their Carry Yield, which is standardized by the volatility of the LEFRI of the respective asset.

- The asset with the highest standardized carry receives the top rank.
- The asset with the lowest standardized carry receives the bottom rank.
- All other assets are ranked accordingly between these two extremes.

The asset class universe is then split into two equal halves. If the number of assets in the ACSI is uneven, one asset is excluded.

- All assets in the top half are assigned long positions until the next Rebalancing Day.
- All assets in the bottom half are assigned short positions until the next Rebalancing Day.

Step 2: Weight Determination
On each Rebalancing Day, the notional percentage weights of the Index Components are reset so that all positions within the respective ACSI contribute equally to the total risk of the ACSI. Risk is measured as the standard deviation of daily log-returns over the past 90 Index Business Days. Weights are rounded to four decimal places and converted into the corresponding number of futures contracts, which remain fixed until the next monthly Rebalancing Day.

Calculation of the XSCAR Strategy Sub-Index

The XSCAR Strategy Sub-Index aggregates its four ACSIs into one portfolio. The ACSIs are weighted inversely proportional to their volatility, with these weightings implemented during the monthly rebalancing process. The XSCAR Strategy Sub-Index consists of a number of units of each ACSI, calculated based on the ACSIs' notional percentage weights.

The daily EUR profit and loss of the XSCAR Strategy Sub-Index is the sum of the daily EUR profit and loss figures of the four ACSIs. These figures are derived from the daily EUR profit and loss of all relevant Futures Roll Indices within the asset class portfolios and converted into EUR if necessary.

2.6 Accuracy

The daily closing price of the Index will be rounded to two decimal places.

3. Index Principles

The Index is designed to reflect the performance of the investment strategy as defined in this handbook. It is denominated in EUR and calculated on an excess return basis. The investment universe consists of liquid, diversified futures markets across the following asset classes: bonds, commodities, equities, and foreign exchange.

The Index combines exposure to global developed equity index markets with a basket of dynamic alternative beta investment strategies.

Portfolio allocation rebalancings and/or repositionings of the Index and its sub-components occur monthly. Risk control is applied on a daily basis, with the objective of maintaining the Index's annualized volatility at approximately 5%.

4. Index Owner

The "**Index Owner**" is Munich Reinsurance Company ("**Munich Re**" or the "**Index Owner**"). The Index Owner will retain all ownership rights, expressed or otherwise, with respect to the Index, including the ability to license, sell or transfer any or all of its ownership rights with respect to the Index.

The Index Owner has appointed an independent Index Calculation Agent to maintain and calculate the Index. The Index Owner may in the future terminate the appointment of the Index Calculation Agent and appoint a replacement index calculation agent.

5. Index Administrator and Index Calculation Agent

The Index Owner has entrusted the day-to-day management and maintenance of the Index, the Top-Level Index and its Sub-Indices to an index administrator, who will also fulfil the function of index calculation agent (the "**Index Administrator**").

The Index Administrator is currently Solactive AG.

The Index Administrator will maintain and employ the rules, procedures and methodology described in this document. This includes the implementation of changes to the Index, the Top-Level Index and its Sub-Indices and/or to the methodology under the instruction of the Index Committee (as defined below). The Index Administrator is responsible for the publication of the values of the Index determined by it as well as any further publication in relation to the Index.

Subject to the terms set out in this document, any determination by the Index Administrator will be made in its sole and absolute discretion by reference to such factors as it deems appropriate at such time. Any such determination by the Index Administrator will, in the absence of manifest error, be final, conclusive and binding.

No assurance can be given that market, regulatory, juridical or fiscal circumstances will not arise that would, in the view of the Index Committee, make a modification or change of the methodology necessary, which then would have to be implemented by the Index Administrator.

6. Calculation during Market Disruption Events and Index Adjustments

The Index Administrator (acting as applicable through the "**Oversight Committee**") may in accordance with the terms of this document, adjust the calculation of, delay or suspend the Index. Any such calculation adjustment, delay, suspension or non-publication may have a negative impact on any instruments linked to the Index.

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6.1 Oversight Committee

The Oversight Committee is composed of staff from the Index Administrator. The Oversight 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 Handbook, must be submitted to the Oversight Committee for prior approval and will be made in compliance with the Methodology Policy, which is available on the Index Administrator's website: https://www.solactive.com/documents/methodology-policy/.

6.2 Market Disruption Event

In periods of market stress the Index Administrator calculates its Indices following predefined and exhaustive arrangements as described in the Index Administrator's Disruption Policy, which is incorporated by reference and available on the Index Administrator's 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

6.3 Index Adjustments

Index Modification

The methodology of the Index is subject to regular review, at least annually. In this context, the Index Owner may make suggestions to the Index Administrator, which are then reviewed by the Index Administrator. In case a need of a Index Modification has been identified within such review (e.g. if the underlying market or economic reality has changed since the launch of the Index, i.e. 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 Index Administrator's Methodology Policy, which is incorporated by reference and available on the Index Administrator's website: https://www.solactive.com/documents/methodology-policy/.

Index Correction

The Index Administrator makes the greatest possible efforts to accurately calculate and maintain its indices. However, errors in the determination process may occur from time to time for variety reasons (internal or external) and therefore, cannot be completely ruled out.

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 are generally depending on the underlying and is specified in the Index Administrator's Correction Policy, which is incorporated by reference and available on the Index Administrator's website: https://www.solactive.com/documents/correction-policy/.

Publication of Index Adjustments

Any Index Adjustments, including changes to the Index Components, changes to the methodology or a cancellation of the Index, as decided by the Index Committee and implemented by the Index Administrator, will be publicly announced by the Index Administrator as promptly as is reasonably practicable and normally at least 60 Index Business Days prior to the effective date of such change(s).

All public announcements and changes in the Index will be announced on the Index Administrator's website under the Section "Announcement", which is available at: https://www.solactive.com/documents/methodology-policy/.

Cancelation of the Index

The Index Administrator has established and maintains clear guidelines on how to identify situations in which the cessation of the 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 Index Administrator's Termination Policy, which is incorporated by reference and available on the Index Administrator's website: https://www.solactive.com/documents/termination-policy/.

7. Historical Data

The values of the Index between the Index Start Date and the Index Live Date have been determined by reference to historical data and must be considered as simulated and thus purely hypothetical. It is provided as an illustration of how the Index would have performed during the period had the Index Calculation Agent began calculating the Index on the Index Start Date using the methodology described in this document. This data does not reflect actual performance, nor was a contemporaneous investment model run of the Index. Whilst any such methodology or assumption is, in the view of the Index Owner, reasonable, the use of historical data may result in material differences between the simulated performance of the Index, prior to the Index Live Date, and any subsequent actual performance. The Index history before the Index Live Date has been determined by the Index Owner and has only partially been verified by the Index Calculation Agent.

Historical levels of the Index for the period from and after the Index Live Date are calculated with reference to the official closing levels of the Index Components determined based on the latest available data published by the relevant futures exchanges and/or benchmark administrators and/or as delivered via the employed information systems.

Past performance of the Index is not a reliable guide to future performance and the past performance of the Index may have been determined on terms different to those described in this Index Handbook. No assurance, representation or warranty is given of the future performance of the Index or that it will achieve its objective. Instruments linked to the Index can fluctuate in price or value and prices, values or income may fall against the interests of any investor exposed to the performance of the Index. Changes in rates of exchange, rates of interest and prices of any Index Components, among other things, may have an adverse effect on the value of the Index.

8. Contact

8.1 Index Owner

The Index Owner can be contacted at the following address:

Munich Reinsurance Company
Markets
Königinstr. 107
80802 München
Germany

Internet: http://www.munichre.com

8.2 Index Administrator

The Index Administrator can be contacted at the following address:

Solactive AG
Platz der Einheit 1
60327 Frankfurt am Main
Germany

Internet: http://www.solactive.com

8.3 Index Calculation Agent

The Index Calculation Agent can be contacted at the following address:

Solactive AG
Platz der Einheit 1
60327 Frankfurt am Main
Germany

Internet: http://www.solactive.com

9. Risk Provisions

Without prejudice to the Disclaimer in the following section regard should be had to the non-exhaustive risk factors below which describe events or circumstances that may affect the calculation and/or the performance of the Index and may be material for the purposes of assessing the risks associated with any investment related to the Index.

9.1 Nature of the Index

The Index is a rule-based formula that enables the value of the Index to be calculated from time to time. Although instruments may be issued or entered into whose return is linked to the performance of the Index, the Index is not itself an investment or instrument and does not give any person any entitlement to, or ownership interest in, any Index Components or any other obligation or asset referenced (directly or indirectly) by the Index.

9.2 Potential Conflicts of Interest

Potential conflicts of interest may exist in the internal teams, divisions or entities of the Munich Re Group. For example, one team may make determinations and take actions in relation to the Index in its capacity as Index Owner, while another team within the organisation may issue or promote/sell products linked to the Index.

In addition, a further team within the organisation may have trading positions in or relation to instruments and assets to which the performance of the Index is directly or indirectly linked (including any Index Component). No entity within the Munich Re Group shall have any duty or obligation to take into account any impact in the performance of the Index when effecting transactions in such instruments and assets.

9.3 Risks associated with an investment in instruments linked to the Index

Counterparty Risk

Instruments linked to the Index may be exposed to counterparty credit risk. If an entity trades, enters into or issues any such instruments and becomes insolvent it may not be able to meet all of its payment obligations.

Interaction Risk

The value of the Index is based on the performance of different investment types. Different types of financial risk may interact unpredictably on these investments, particularly in times of market stress.

Tax

The value of the Index may be reduced to account for certain taxes and other deductions and therefore, may impact the performance of the Index and returns on any instruments linked to the Index.

Duty of Care

Subject always to their regulatory obligations and except as may be required by applicable law, neither the Index Owner, the Index Administrator (including where it acts through the Index Committee) nor the Index Calculation Agent shall have a duty of care or any fiduciary duty to any person in respect of the Index including any investor in any instrument linked to the Index. Neither the Index Owner, the Index Administrator nor the Index Calculation Agent is acting as an investment adviser or manager or providing advice of any nature in relation to the Index or any instrument linked to the Index.

Other Risks

There is no guarantee, warranty or assurance that this document discloses all possible factors that may affect the performance of the Index and the risks of investing in any instrument that is linked to the Index.

Before investing in any such instrument, you must satisfy yourself that you fully understand the risks of such investment and you are solely responsible for making an independent appraisal of and investigation into the Index and should not rely on this document as constituting investment advice.

10. DISCLAIMER

THE INDEX OWNER, THE INDEX ADMINISTRATOR AND THE INDEX CALCULATION AGENT MAY EACH BE SUBJECT TO A NUMBER OF CONFLICTS OF INTEREST IN CONNECTION WITH THEIR ROLE AND SERVICES PERFORMED WITH RESPECT TO THE INDEX. IN THE EVENT THAT SUCH CONFLICTS ARISE, THE INDEX OWNER, THE INDEX CALCULATION AGENT AND THE INDEX ADMINISTRATOR SHALL USE THEIR REASONABLE ENDEAVOURS TO RESOLVE SUCH CONFLICTS OF INTEREST FAIRLY (HAVING REGARD TO THEIR RESPECTIVE OBLIGATIONS AND DUTIES).

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