

INDEX GUIDELINE

SOLACTIVE LUXURY DYNAMIC FACTORS INDEX

Version 1.2

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INTRODUCTION

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

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

The GUIDELINE and the policies and methodology documents referenced herein contain the underlying principles and rules regarding the structure and operation of the INDEX. SOLACTIVE does not offer any explicit or tacit guarantee or assurance, neither pertaining to the results from the use of the INDEX nor the level of the INDEX at any certain point in time nor in any other respect. SOLACTIVE strives to the best of its ability to ensure the correctness of the calculation. There is no obligation for SOLACTIVE – irrespective of possible obligations to issuers – to advise third parties, including investors and/or financial intermediaries, of any errors in the INDEX. The publication of the INDEX by SOLACTIVE does not constitute a recommendation for capital investment and does not contain any assurance or opinion of SOLACTIVE regarding a possible investment in a financial instrument based on this INDEX.



1. INDEX SPECIFICATIONS

1.1. SCOPE OF THE INDEX

Category	Description
Asset Class	Equity
Strategy	Representation of securities with a very high exposure to the Luxury sector (e.g. Distilleries / Golf Courses and Country Clubs / Jewellery and Gems Production / Jewellery and Other Accessories Production / Jewellery Stores / Leather, Handbags and Luggage Goods Production / Luxury Hotels and Resorts / Premium Wear Production). The final composition comprises the 20 highest ranked securities according to factors such as Quality, Momentum and a Value Filter.
Regional Allocation	Developed Markets
Rebalancing Fee	-
Rebalancing Frequency	Quarterly

1.2. IDENTIFIERS AND PUBLICATION

The INDEX is published under the following identifiers:

Name	ISIN	Currency	Type	RIC	BBG ticker
Solactive Luxury Dynamic Factors Index PR	DE000SLOAT84	EUR	PR*	.SOLUXDFP	SOLUXDFP
Solactive Luxury Dynamic Factors Index NTR	DE000SLOAT92	EUR	NTR*	.SOLUXDFN	SOLUXDFN
Solactive Luxury Dynamic Factors Index GTR	DE000SLOAUA2	EUR	GTR*	.SOLUXDFT	-

* PR, NTR, GTR means that the Index is calculated as price return, net total return, gross total return Index as described in the Equity Index Methodology, which is available on the SOLACTIVE website: <https://www.solactive.com/documents/equity-index-methodology/>

The INDEX is published on the website of the INDEX ADMINISTRATOR (www.solactive.com) and is, in addition, available via the price marketing services of Boerse Stuttgart GmbH and may be distributed to all of its affiliated vendors. Each vendor decides on an individual basis as to whether it will distribute or display the INDEX via its information systems.

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



1.3. INITIAL LEVEL OF THE INDEX

The initial level of the INDEX on the 20/04/2007, the START DATE, is 100. Historical values from the 12/03/2020, the LIVE DATE, will be recorded in accordance with Article 8 of the BMR. Levels of the INDEX published for a period prior to the LIVE DATE have been back-tested.

1.4. PRICES AND CALCULATION FREQUENCY

The level of the INDEX is calculated on each CALCULATION DAY from 9:00 a.m. to 10:50 p.m. CET based on the TRADING PRICES on the EXCHANGES on which the INDEX COMPONENTS are listed. TRADING PRICES of INDEX COMPONENTS not listed in the INDEX CURRENCY are converted using the current Reuters spot foreign exchange rate. Should there be no current TRADING PRICE for an INDEX COMPONENT, the later of: (i) the most recent CLOSING PRICE; or (ii) the last available TRADING PRICE for the preceding TRADING DAY is used in the calculation.

In addition to the intraday calculation a closing level of the INDEX for each CALCULATION DAY is also calculated. This closing level is based on the CLOSING PRICES for the INDEX COMPONENTS on the respective EXCHANGES on which the INDEX COMPONENTS are listed. The CLOSING PRICES of INDEX COMPONENTS not listed in the INDEX CURRENCY are converted using the 4pm London time WM Fixing quoted by Reuters. If there is no 4pm London time WM Fixing for the relevant CALCULATION DAY, the last available 4pm London time WM Fixing will be used for the closing level calculation.

1.5. LICENSING

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



2. INDEX SELECTION

On each SELECTION DAY, the INDEX ADMINISTRATOR will revise the composition of the INDEX.

In a first step, the INDEX ADMINISTRATOR determines the INDEX UNIVERSE in accordance with Section 2.1. The INDEX UNIVERSE comprises all those financial instruments which fulfill the INDEX UNIVERSE REQUIREMENTS (as specified in Section 2.1) and will constitute a starting pool from which the components of the INDEX will be selected. Based on this INDEX UNIVERSE, the new composition of the INDEX will be determined by applying the rules outlined in Section 2.2.

Each INDEX COMPONENT will be assigned a weight as described in Section 2.3.

2.1. INDEX UNIVERSE REQUIREMENTS

The INDEX UNIVERSE is comprised of all financial instruments which fulfill the below requirements (the “INDEX UNIVERSE REQUIREMENTS”):

First, all securities from the INDEX STARTING UNIVERSE are eligible for inclusion.

Second, eligible securities need to fulfill the following additional criteria:

- Only securities that have been listed for a minimum of 290 BUSINESS DAYS, immediately preceding and including the SELECTION DAY, are eligible for inclusion.

The determination of the INDEX UNIVERSE is fully rule-based and the INDEX ADMINISTRATOR cannot make any discretionary decisions.

2.2. SELECTION OF THE INDEX COMPONENTS

Based on the INDEX UNIVERSE, the initial composition of the INDEX as well as any selection for an ordinary rebalance is determined on the SELECTION DAY in accordance with the following rules (the “INDEX COMPONENT REQUIREMENTS”):

1. Computation of the Z-SCORE for the below stated financial figures for each security in the INDEX UNIVERSE:

Quality Factors	Momentum Factors	Value Filter Factors
RETURN ON EQUITY	MEDIUM-TERM MOMENTUM	Inverse of the PRICE-EARNINGS Ratio
GROSS PROFITABILITY MARGIN	SHORT-TERM REVERSAL	FREE CASHFLOW YIELD
BALANCE SHEET ACCRUAL RATIO	FREE CASHFLOW PER SHARE MOMENTUM	



2. Computation of the MULTIFACTOR QUALITY FACTOR SCORE and MULTIFACTOR MOMENTUM FACTOR SCORE and ranking of securities thereafter based on each of the two scores separately in descending order (i.e., the security with the highest score is assigned rank 1).
3. Computation of the MULTIFACTOR SELECTION SCORE as the average of the Quality and Momentum rank and subsequent classification of securities in ascending order (i.e., the security with the lowest score is assigned rank 1). If two securities receive the same rank based on the MULTIFACTOR SELECTION SCORE, the security with the higher average of the MULTIFACTOR QUALITY FACTOR SCORE and MULTIFACTOR MOMENTUM FACTOR SCORE will be selected.
4. The top 25 securities based on the rank of the MULTIFACTOR SELECTION SCORE are selected.
5. Computation of the MULTIFACTOR VALUE FILTER FACTOR SCORE for the top 25 securities and subsequent ranking in descending order (i.e., the security with the highest score is assigned rank 1),
6. The top 20 securities are selected as INDEX COMPONENTS.

The selection of the INDEX COMPONENTS is fully rule-based and the INDEX ADMINISTRATOR cannot make any discretionary decisions.

2.3. WEIGHTING OF THE INDEX COMPONENTS

On each SELECTION DAY the weight of each INDEX COMPONENT is determined by the following steps:

1. Computation of the Z-SCORE of the INVERSE VOLATILITY.
2. Calculation of the MODIFIED WEIGHTING SCORE using the results from step 1.
3. The index components are weighted by their MODIFIED WEIGHTING SCORE, i.e. the STOCK WEIGHT.
4. The FINAL WEIGHTS are determined by adjusting the STOCK WEIGHT with its respective LIQUIDITY FACTOR.



3. REBALANCE

3.1. ORDINARY REBALANCE

In order to reflect the new selection of the INDEX COMPONENTS determined on the SELECTION DAY (in accordance with Section 2.1 and 2.2) the INDEX is adjusted on the REBALANCE DAY after CLOSE OF BUSINESS.

This is carried out by implementing the weights as determined on the SELECTION DAY.

For more information on the rebalance procedure please refer to the Equity Index Methodology, which is incorporated by reference and available on the SOLACTIVE website: <https://www.solactive.com/documents/equity-index-methodology/>.

The INDEX is rebalanced over the REBALANCE PERIOD to downsize rebalance transactions in accordance with the Equity Index Methodology, which is incorporated by reference and available on the SOLACTIVE website: <https://www.solactive.com/documents/equity-index-methodology/>.

SOLACTIVE will publish any changes made to the INDEX COMPONENTS with sufficient notice before the REBALANCE DAY on the SOLACTIVE webpage under the section "Announcement", which is available at <https://www.solactive.com/news/announcements/>.

3.2. EXTRAORDINARY REBALANCE

The INDEX is not rebalanced extraordinarily.



4. CALCULATION OF THE INDEX

4.1. INDEX FORMULA

The INDEX is calculated as a price return, net total return, gross total return Index.

The calculation is performed according to the Equity Index Methodology, which is available on the SOLACTIVE website: <https://www.solactive.com/documents/equity-index-methodology/>. The *standard* index formula stipulates that the level of the INDEX changes based on the change of the prices of its INDEX COMPONENTS taking into account their weight in the INDEX and any currency conversion in case the price of an INDEX COMPONENT is quoted in a currency other than the INDEX CURRENCY.

Any dividends or other distributions are reinvested back into the INDEX COMPONENT paying the dividend or other distribution at the opening of the effective date (the so called ex-date) of the payment of such dividend or other distribution.

A more detailed description of the mechanics of the index calculation formula can be found in the Equity Index Methodology under Section 1.2.

4.2. ACCURACY

The level of the INDEX will be rounded to two decimal places. TRADING PRICES and foreign exchange rates will be rounded to six decimal places.

4.3. ADJUSTMENTS

Under certain circumstances, an adjustment of the INDEX may be necessary between two regular REBALANCE DAYS. Such adjustment has to be made if a corporate action (as specified in Section 4.4 below) in relation of an INDEX COMPONENT occurs. Such adjustment may have to be done in relation to an INDEX COMPONENT and/or may also affect the number of INDEX COMPONENTS and/or the weighting of certain INDEX COMPONENTS and will be made in compliance with the SOLACTIVE Equity Index Methodology, which is incorporated by reference and available on the SOLACTIVE website: <https://www.solactive.com/documents/equity-index-methodology/>.

SOLACTIVE will announce the INDEX adjustment giving a notice period of at least two TRADING DAYS (with respect to the affected INDEX COMPONENT) on the SOLACTIVE website under the Section "Announcements", which is available at <https://www.solactive.com/news/announcements/>. The INDEX adjustments will be implemented on the effective day specified in the respective notice.



4.4. CORPORATE ACTIONS

As part of the INDEX maintenance SOLACTIVE will consider various events – also referred to as corporate actions – which result in an adjustment to the INDEX between two regular REBALANCE DAYS. Such events have a material impact on the price, weighting or overall integrity of INDEX COMPONENTS. Therefore, they need to be accounted for in the calculation of the INDEX. Corporate actions will be implemented from the cum-day to the ex-day of the corporate action, so that the adjustment to the INDEX coincides with the occurrence of the price effect of the respective corporate action.

Adjustments to the INDEX to account for corporate actions will be made in compliance with the Equity Index Methodology, which is available on the SOLACTIVE website: <https://www.solactive.com/documents/equity-index-methodology/>. This document contains for each corporate action a brief definition and specifies the relevant adjustment to the INDEX variables.

While SOLACTIVE aims at creating and maintaining its methodology for the treatment of corporate actions as generic and transparent as possible and in line with regulatory requirements, it retains the right in accordance with the Equity Index Methodology to deviate from these standard procedures in case of any unusual or complex corporate action or if such a deviation is made to preserve the comparability and representativeness of the INDEX over time.

SOLACTIVE considers the following, but not conclusive, list of corporate actions as relevant for the INDEX maintenance:

- > Cash Distributions (e.g. payment of a dividend)
- > Stock distributions (e.g. payment of a dividend in form of additional shares)
- > Stock distributions of another company (e.g. payment of a dividend in form of additional shares of another company (e.g. of a subsidiary))
- > Share splits (company's present shares are divided and therefore multiplied by a given factor)
- > Reverse splits (company's present shares are effectively merged)
- > Capital increases (such as issuing additional shares)
- > Share repurchases (a company offer its shareholders the option to sell their shares to a fixed price)
- > Spin-offs (the company splits its business activities into two or more entities and distributes new equity shares in the created entities to the shareholders of the former entity)
- > Mergers & Acquisitions (transaction in which the ownership of a company (or other business organizations) are transferred or consolidated with other entities, e.g. fusion of two or more separate companies into one entity)
- > Delistings (company's shares are no longer publicly traded at a stock exchange)
- > Nationalization of a company (effective control of a legal entity is taken over by a state)
- > Insolvency



4.5. RECALCULATION

SOLACTIVE 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. SOLACTIVE 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 SOLACTIVE Correction Policy, which is incorporated by reference and available on the SOLACTIVE website: <https://www.solactive.com/documents/correction-policy/>.

4.6. MARKET DISRUPTION

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



5. MISCELLANEOUS

5.1. DISCRETION

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

5.2. METHODOLOGY REVIEW

The methodology of the INDEX is subject to regular review, at least annually. In case a need of a change of the methodology has been identified within such review (e.g. if the underlying market or economic reality has changed since the launch of the INDEX, 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 SOLACTIVE Methodology Policy, which is incorporated by reference and available on the SOLACTIVE website: <https://www.solactive.com/documents/methodology-policy/>.

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

5.3. CHANGES IN CALCULATION METHOD

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



5.4. TERMINATION

SOLACTIVE makes the greatest possible efforts to ensure the resilience and continued integrity of its indices over time. Where necessary, SOLACTIVE follows a clearly defined and transparent procedure to adapt Index methodologies to changing underlying markets (see Section 5.2 "Methodology Review") in order to maintain continued reliability and comparability of the indices. Nevertheless, if no other options are available the orderly cessation of the INDEX may be indicated. This is usually the case when the underlying market or economic reality, which an index is set to measure or to reflect, changes substantially and in a way not foreseeable at the time of inception of the index, the index rules, and particularly the selection criteria, can no longer be applied coherently or the index is no longer used as the underlying value for financial instruments, investment funds and financial contracts.

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

5.5. OVERSIGHT

An oversight committee composed of staff from SOLACTIVE and its subsidiaries (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 GUIDELINE, 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 SOLACTIVE website: <https://www.solactive.com/documents/methodology-policy/>.



6. DEFINITIONS

“**AVERAGE TRADED VALUE**” shall have the meaning as defined in Section “Appendix”.

“**BALANCE SHEET ACCRUAL RATIO**” shall have the meaning as defined in Section “Appendix”.

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

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

“**BUSINESS DAY**” is a day on which the New York Stock Exchange (NYSE) is open for general business.

“**CALCULATION DAY**” is every weekday from Monday to Friday. A day on which New York Stock Exchange (NYSE) or the London Stock Exchange, or the Euronext Paris Exchange is not open for general business is not a CALCULATION DAY.

“**CLOSE OF BUSINESS**” is the calculation time of the closing level of the INDEX as outlined in Section 1.4.

The “**CLOSING PRICE**” in respect of an INDEX COMPONENT and a TRADING DAY is a security's final regular-hours TRADING PRICE published by the EXCHANGE and determined in accordance with the EXCHANGE regulations. If the EXCHANGE has no or has not published a CLOSING PRICE in accordance with the EXCHANGE rules for an INDEX COMPONENT, the last TRADING PRICE will be used.

“**EXCHANGE**” is with respect to the INDEX and every INDEX COMPONENT, the respective exchange where the INDEX COMPONENT has its listing.

“**FINAL WEIGHTS**” shall have the meaning as defined in Section “Appendix”.

“**FREE CASHFLOW PER SHARE MOMENTUM**” shall have the meaning as defined in Section “Appendix”.

“**FREE CASHFLOW YIELD**” shall have the meaning as defined in Section “Appendix”.

“**GROSS PROFIT MARGIN**” shall have the meaning as defined in Section “Appendix”.

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

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

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

“**INDEX COMPONENT**” is each security reflected in the INDEX.

“**INDEX COMPONENT REQUIREMENTS**” shall have the meaning as defined in Section 2.2.

“**INDEX CURRENCY**” is the currency specified in the column “Currency” in the table in Section 1.2.

“**INDEX UNIVERSE REQUIREMENTS**” shall have the meaning as defined in Section 2.1.

“**INDEX UNIVERSE**” represents all financial instruments which fulfill the INDEX UNIVERSE REQUIREMENTS.

“**INDEX STARTING UNIVERSE**” includes all securities as listed in Section 7.1 with a very high exposure to the Luxury sector (e.g. Distilleries / Golf Courses and Country Clubs, Jewellery and Gems Production, Jewellery and Other Accessories Production, Jewellery Stores, Leather, Handbags and Luggage Goods Production,



Luxury Hotels and Resorts, Premium Wear Production). The final composition comprises the 20 highest ranked securities according to factors such as Quality, Momentum and Value Filter). The INDEX STARTING UNIVERSE will be updated following IPO, M&A and material changes in the economy. All amendments of the INDEX STARTING UNIVERSE will be subjected to the decision of the OVERSIGHT COMMITTEE.

“**INVERSE VOLATILITY**” shall have the meaning as defined in Section “Appendix”.

“**LIQUIDITY FACTOR**” shall have the meaning as defined in Section “Appendix”.

“**LIVE DATE**” shall have the meaning as defined in Section 1.3.

“**MEDIUM-TERM MOMENTUM**” shall have the meaning as defined in Section “Appendix”.

“**MODIFIED WEIGHTING SCORE**” shall have the meaning as defined in Section “Appendix”.

“**MULTIFACTOR VALUE FILTER FACTOR SCORE**” shall have the meaning as defined in Section “Appendix”.

“**MULTIFACTOR MOMENTUM FACTOR SCORE**” shall have the meaning as defined in Section “Appendix”.

“**MULTIFACTOR QUALITY FACTOR SCORE**” shall have the meaning as defined in Section “Appendix”.

“**MULTIFACTOR SELECTION SCORE**” shall have the meaning as defined in Section “Appendix”.

“**NET OPERATING ASSETS**” shall have the meaning as defined in Section “Appendix”.

“**OVERSIGHT COMMITTEE**” shall have the meaning as defined in Section 5.5.

“**PRICE TO EARNINGS**” shall have the meaning as defined in Section “Appendix”.

“**REBALANCE DAY**” is the third Friday in January, April, July, and October. If that day is not a TRADING DAY the REBALANCE DAY will be the immediately following TRADING DAY.

“**REBALANCE PERIOD**” is the period starting from (and including) the REBALANCE DAY until and (including) the immediately following 2 TRADING Days (for clarification: the entire REBALANCE PERIOD is 3 Trading Days).

“**REPORTING DATE**”: means, in respect of a company, the date on which such company releases its financial report, which could be quarterly or semi-annually based on the reporting cycle of that company.

“**RETURN ON EQUITY**” shall have the meaning as defined in Section “Appendix”.

“**SELECTION DAY**” is the last BUSINESS DAY of December, March, June and September

“**SHORT-TERM REVERSAL**” shall have the meaning as defined in Section “Appendix”.

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

“**START DATE**” shall have the meaning as defined in Section 1.3.

“**STOCK WEIGHT**” shall have the meaning as defined in Section “Appendix”.

“**TRADING DAY**” is with respect to an INDEX COMPONENT included in the INDEX at the REBALANCE DAY and every INDEX COMPONENT included in the INDEX at the CALCULATION DAY immediately following the REBALANCE DAY (for clarification: this provision is intended to capture the TRADING DAYS for the securities to be included in the INDEX as new INDEX COMPONENTS with close of trading on the relevant EXCHANGE on the REBALANCE DAY) a day



on which the relevant EXCHANGE is open for trading (or a day that would have been such a day if a market disruption had not occurred), excluding days on which trading may be ceased prior to the scheduled EXCHANGE closing time and days on which the EXCHANGE is open for a scheduled shortened period. The INDEX ADMINISTRATOR is ultimately responsible as to whether a certain day is a TRADING DAY.

The “**TRADING PRICE**” in respect of an INDEX COMPONENT and a TRADING DAY is the most recent published price at which the INDEX COMPONENT was traded on the respective EXCHANGE.

“**Z-SCORE**” shall have the meaning as defined in Section “Appendix”.



7. APPENDIX

7.1. INDEX STARTING UNIVERSE

Name	SEDOL	Bloomberg Ticker
ACCOR SA	5852842	AC FP Equity
ASTON MARTIN LAGONDA GLOBAL	BFXZC44	AML LN Equity
BROWN-FORMAN CORP-CLASS B	2146838	BF/B UN Equity
BURBERRY GROUP PLC	3174300	BRBY LN Equity
CANADA GOOSE HOLDINGS INC	BF0B2F6	GOOS CT Equity
CAPRI HOLDINGS LTD	BJ1N1M9	CPRI UN Equity
CARNIVAL CORP	2523044	CCL UN Equity
CHOW TAI FOOK JEWELLERY LTD.	B4R39F7	1929 HK Equity
COMPAGNIE FINANCIERE RICHEMONT SA	BCRWZ18	CFR SE Equity
COTY INC-CL A	BBBSMJ2	COTY UN Equity
CROWN RESORTS LTD	B29LCJ0	CWN AT Equity
DAVIDE CAMPARI-MILANO SPA	BZ4CMZ5	CPR IM Equity
DIAGEO PLC	237400	DGE LN Equity
ESTEE LAUDER COMPANIES INC	2320524	EL UN Equity
FARFETCH LTD	BFD20M9	FTCH UN Equity
FERRARI NV	BD6G507	RACE IM Equity
GALAXY ENTERTAINMENT GP.	6465874	27 HK Equity
HERMES INTERNATIONAL SCA	5253973	RMS FP Equity



HUGO BOSS AG	B88MHC4	BOSS GY Equity
HYATT HOTELS CORP	B5B82X4	H UN Equity
INTERCONTINENTAL HOTELS GROUP PLC	BF7NT10	IHG UN Equity
KERING SA	5505072	KER FP Equity
L OREAL SA	4057808	OR FP Equity
LAS VEGAS SANDS CORP	B02T2J7	LVS UN Equity
LVMH MOET HENNESSY LOUIS VUITTON SE	4061412	MC FP Equity
MACAU LEGEND DEVELOPMENT LTD	BBMR4Z8	1680 HK Equity
MARRIOTT INTERNATIONAL -CL A	2210614	MAR UW Equity
MELCO RESORTS & ENTERTAINMENT LTD	B1KYHF2	MLCO UW Equity
MGM RESORTS INTERNATIONAL	2547419	MGM UN Equity
MONCLER SPA	BGLP232	MONC IM Equity
NORWEGIAN CRUISE LINE HOLDINGS LTD	B9CGTC3	NCLH UN Equity
PANDORA A/S	B44XTX8	PNDORA DC Equity
PERNOD RICARD SA	4682329	RI FP Equity
POLARIS INC	2692933	PII UN Equity
PORSCHE AUTOMOBIL HOLDING SE	7101069	PAH3 GY Equity
PRADA S.P.A.	B4PFFW4	1913 HK Equity
PVH CORP	B3V9F12	PVH UN Equity
RALPH LAUREN CORP	B4V9661	RL UN Equity
REMY COINTREAU SA	4741714	RCO FP Equity
ROLLS-ROYCE HOLDING PLC	B63H849	RR/ LN Equity



ROYAL CARIBBEAN CRUISES LTD	2754907	RCL UN Equity
SALVATORE FERRAGAMO SPA	B5VZ053	SFER IM Equity
SANDS CHINA LTD	B5B23W2	1928 HK Equity
SHANGRI LA ASIA LTD ORD	6771032	69 HK Equity
SHISEIDO CO LTD	6805265	4911 JT Equity
SIGNET JEWELERS LTD	B3CTNK6	SIG UN Equity
SJM HOLDINGS	B2NR3Y6	880 HK Equity
SKYCITY ENTERTAINMENT GROUP LIMITED	6823193	SKC NZ Equity
SWATCH GROUP AG	7184736	UHRN SE Equity
TAPESTRY INC	BF09HX3	TPR UN Equity
TIFFANY & CO	2892090	TIF UN Equity
TOLL BROTHERS INC	2896092	TOL UN Equity
TREASURY WINE ESTATES LIMITED	B61JC67	TWE AT Equity
USS CO (TOKAI) LTD ORD	6171494	4732 JT Equity
VAIL RESORTS INC	2954194	MTN UN Equity
WYNN RESORTS LTD	2963811	WYNN UW Equity



7.2. FINANCIAL FIGURES

For all financial figures (excluding MEDIUM-TERM MOMENTUM and SHORT-TERM REVERSAL) in this section the following procedure is applied.

Data is forward filled three quarters. For clarification, if at a specific SELECTION DAY no data is available, the data from the previous SELECTION DAY is used. This procedure will be continued up to three quarters.

“**RETURN ON EQUITY**” is computed based on the REPORTING DATE. Whenever RETURN ON EQUITY is negative or any error value (#NA, #NUM!, #VALUE!, #N/A), it is replaced by 0.

“**GROSS PROFIT MARGIN**” is computed according to the following formula:

$$GP_{i,t} = \frac{Sales_{i,rep_{i,t}} - COGS_{i,rep_{i,t}}}{Sales_{i,rep_{i,t}}}$$

Where:

$rep_{i,t}$: The most recent REPORTING DATE of stock i immediately prior to SELECTION DAY t .

$Sales_{i,rep_{i,t}}$: Sales (EUR) of stock i as reported on $rep_{i,t}$.

$COGS_{i,rep_{i,t}}$: Cost of Goods Sold (EUR) of stock i as reported on $rep_{i,t}$. This represents the direct costs of production and/or costs of services rendered, including depreciation and amortization, incurred in the revenue generation process during the period.

All figures are primarily based on a last twelve months reporting basis. If that is not available, last twelve months semi-annual reporting is chosen.

“**BALANCE SHEET ACCRUAL RATIO**” is calculated according to the following formula:

$$BSAR_{i,t} = \frac{(NOA_{i,rep_{i,t}} - NOA_{i,rep_{i,t_0}})}{(NOA_{i,rep_{i,t}} + NOA_{i,rep_{i,t_0}})/2}$$

Where:

$rep_{i,t}$: The most recent REPORTING DATE of stock i immediately prior to SELECTION DAY t .

rep_{i,t_0} : The fourth REPORTING DATE preceding REPORTING DATE $rep_{i,t}$ if the reporting basis is quarterly. The second REPORTING DATE preceding REPORTING DATE $rep_{i,t}$ if the reporting basis is semi-annually.

$NOA_{i,rep_{i,t}}$: NET OPERATING ASSETS of stock i as reported on $rep_{i,t}$.

$NOA_{i,rep_{i,t_0}}$: NET OPERATING ASSETS of stock i as reported on rep_{i,t_0} .



“**NET OPERATING ASSETS**” is calculated as:

$$NOA_{i,t} = (\text{total_asset}_{i,rep_{i,t}} - \text{cash}_{i,rep_{i,t}}) - (\text{total_liabilities}_{i,rep_{i,t}} - \text{total_debt}_{i,rep_{i,t}})$$

Where:

$rep_{i,t}$: The most recent REPORTING DATE of stock i immediately prior to SELECTION DAY t .

$total_asset_{i,rep_{i,t}}$: Total Assets (EUR) of stock i as reported on $rep_{i,t}$. Represents the total value of resources the company is using for its operations.

$total_debt_{i,rep_{i,t}}$: Total Debt of stock i as reported on $rep_{i,t}$. Total Debt represents all the interest-bearing obligations of the company, regardless of when these obligations are due for payments.

$total_liabilities_{i,rep_{i,t}}$: Total Liabilities (EUR) of stock i as reported on $rep_{i,t}$. Total Liabilities represents all the short-terms and long-term obligations expected to be satisfied by the company.

$cash_{i,rep_{i,t}}$: Cash & Equivalents (EUR) of stock i as reported on $rep_{i,t}$. It represents the total value of items commonly identified as cash and equivalents in the applicable industry sector. This includes the most liquid assets which are readily available for use.

All figures are primarily based on a quarterly reporting basis. If that is not available, semi-annual reporting is chosen.

“**MEDIUM-TERM MOMENTUM**” is calculated according to the following formula:

$$MTM_{i,t} = \frac{(\sum_{j=0}^{59} \text{Price}_{i,t-j})/60}{(\sum_{j=0}^{251} \text{Price}_{i,t-j})/252}$$

Where:

$\text{Price}_{i,t-j}$: Represents the CLOSING PRICE of stock i , j BUSINESS DAYS immediately prior to SELECTION DAY t . Excluding all global holidays.

“**SHORT-TERM REVERSAL**” is calculated according to the following formula:

$$STR_{i,t} = \frac{(\sum_{j=0}^{19} \text{Price}_{i,t-j})/20}{(\sum_{j=0}^{59} \text{Price}_{i,t-j})/60}$$

Where:

$\text{Price}_{i,t-j}$: Represents the CLOSING PRICE of stock i , j BUSINESS DAYS immediately prior to SELECTION DAY t . Excluding all global holidays.

“**FREE CASHFLOW PER SHARE MOMENTUM**” is calculated according to the following formula:



$$FCM_{i,t} = \frac{FCFPS_{i,rep_{i,t}} - FCFPS_{i,rep_{i,t-4}}}{Price_{i,t}}$$

Where:

$rep_{i,t}$: The most recent REPORTING DATE of stock i immediately prior to SELECTION DAY t .

$rep_{i,t-4}$: The fourth REPORTING DATE preceding REPORTING DATE $rep_{i,t}$.

$Price_{i,t}$: CLOSING PRICE (EUR) of stock i as of SELECTION DAY i .

$FCFPS_{i,rep_{i,t}}$: Free Cash Flow Per Share (EUR) of stock i as reported on $rep_{i,t}$. This represents the free cash flow divided by total number of common shares.

$FCFPS_{i,rep_{i,t-4}}$: Free Cash Flow Per Share (EUR) of stock i as reported on $rep_{i,t-4}$.

All figures are primarily based on a last twelve months reporting basis. If that is not available, last twelve months semi-annual reporting is chosen.

“**FREE CASHFLOW YIELD**” is calculated according to the following formula:

$$FCFY_{i,t} = \frac{FCFPS_{i,rep_{i,t}}}{Price_{i,t}}$$

Where:

$rep_{i,t}$: The most recent REPORTING DATE of stock i immediately prior to SELECTION DATE t .

$Price_{i,t}$: CLOSING PRICE (EUR) of stock i as of SELECTION DAY i .

$FCFPS_{i,rep_{i,t}}$: Free Cash Flow Per Share (EUR) of stock i as reported on $rep_{i,t}$.

All figures are primarily based on a last twelve months reporting basis. If that is not available, last twelve months semi-annual reporting is chosen.

“**PRICE TO EARNINGS**” is calculated according to the following formula:

$$PE_{i,t} = \frac{Price_{i,t}}{EPS_{i,rep_{i,t}}}$$

Where:

$rep_{i,t}$: The most recent REPORTING DATE of stock i immediately prior to SELECTION DATE t .

$PE_{i,t}$: Price to Earnings of stock i calculated on SELECTION DATE t .

$Price_{i,t}$: CLOSING PRICE (EUR) of stock i as of SELECTION DAY i .

$EPS_{i,rep_{i,t}}$: Earnings Per Share (EUR) of stock i as reported on $rep_{i,t}$.

All figures are primarily based on a last twelve months reporting basis. If that is not available, last twelve months semi-annual reporting is chosen.



7.3. COMPUTATION FORMULAS

The “**Z-SCORE**” is the standardization of the metric of a factor and is defined as follows:

$$Z_{i,t}(F) = \max \left[\min \left(\left(\frac{F_{i,t} - \mu_{F,t}}{\sigma_{F,t}} \right), 3 \right), -3 \right]$$

Where:

$$\sigma_{F,t} = \sqrt{\frac{\sum_{i=1}^{N_t} (F_{i,t} - \mu_{F,t})^2}{N_t - 1}}$$

$$\mu_{F,t} = \frac{\sum_{i=1}^{N_t} F_{i,t}}{N_t}$$

$F_{i,t}$: The value of factor **F** of stock *i* on Selection Day *t*.

$\sigma_{F,t}$: The standard deviation of factor **F** on SELECTION DAY *t*.

$\mu_{sm,t}$: The mean of the factor **F** on SELECTION DAY *t*.

N_t : The total number of stocks with available data for the factor **F** on SELECTION DAY *t*.

“**MULTIFACTOR QUALITY FACTOR SCORE**” is the average of Z-Scores of quality factors at the SELECTION DAY .

$$Z_{i,t}(QF) = \frac{1}{M_{i,t}} \times \sum_{m=1}^{M_{i,t}} Z_{i,t}(F_m)$$

$Z_{i,t}(F_m)$: The Z-SCORE of quality factor F_m of stock *i* at SELECTION DAY *t*.

QF: Quality factors (RETURN ON EQUITY, GROSS PROFITABILITY MARGIN, BALANCE SHEET ACCRUAL RATIO)

$M_{t,i}$: The total number of factors for stock *i*, for which the Z-SCORE is available on SELECTION DAY *t*

The Z-SCORE for the **BALANCE SHEET ACCRUAL RATIO** is calculated over the negative value.

$Z_{i,t}(QF)$ is calculated only if $M_{t,i}$ is at least 2.

“**MULTIFACTOR MOMENTUM FACTOR SCORE**” is the average of Z-Scores of quality factors at the SELECTION DAY *t*.

$$Z_{i,t}(MF) = \frac{1}{M_{i,t}} \times \sum_{m=1}^{M_{i,t}} Z_{i,t}(F_m)$$



$Z_{i,t}(F_m)$: The Z-SCORE of momentum factor F_m of stock i at SELECTION DAY t .

MF : Momentum factors (MEDIUM-TERM MOMENTUM, SHORT-TERM REVERSAL, FREE CASHFLOW PER SHARE MOMENTUM)

$M_{t,i}$: The total number of factors for stock i , for which the Z-SCORE is available on SELECTION DAY t .

$Z_{i,t}(MF)$ is calculated only if $M_{t,i}$ is at least 2.

“**MULTIFACTOR SELECTION SCORE**” is defined as the average of the rank of the MULTIFACTOR QUALITY FACTOR SCORE and the MULTIFACTOR MOMENTUM FACTOR SCORE. The computation is based on the following formula:

$$Z_{i,t}(S) = \frac{1}{2} \times (\text{Rank}(Z_{i,t}(QF)) + \text{Rank}(Z_{i,t}(MF)))$$

Where:

$\text{Rank}(Z_{i,t}(QF))$: The rank of MULTIFACTOR QUALITY FACTOR SCORE.

$\text{Rank}(Z_{i,t}(MF))$: The rank of MULTIFACTOR MOMENTUM FACTOR SCORE.

The MULTIFACTOR SELECTION SCORE is only calculated if both rankings are available, $\text{Rank}(Z_{i,t}(QF))$ and $\text{Rank}(Z_{i,t}(MF))$. If none or only one ranking is available the MULTIFACTOR SELECTION SCORE is not computed.

“**MULTIFACTOR VALUE FILTER FACTOR SCORE**” is the average of Z-SCORES for each Value Filter factor and is calculated in accordance with the below formula:

$$Z_{i,t}(FF) = \frac{1}{M_{t,i}} \times \sum_{m=1}^{M_{t,i}} Z_{i,t}(F_m)$$

Where:

$Z_{i,t}(FF)$: The Z-SCORE of Value Filter factor F_m of stock i on SELECTION DAY t .

FF : Value Filter factors (Inverse of the PRICE-EARNINGS Ratio, FREE CASHFLOW YIELD)

$M_{t,i}$: The total number of Value Filter factors for stock i , for which the Z-SCORE is available on Selection Day t .

The $Z_{i,t}(FF)$ is calculated only if $M_{t,i}$ is at least 1.

“**INVERSE VOLATILITY**” of returns of stock i , on SELECTION DAY t over 260 BUSINESS DAYS.

$$\text{InverseVol}_{i,t} = \left(\sqrt{252 \times \frac{\sum_{j=0}^{259} (r_{i,t-j} - \bar{r}_{i,t})^2}{260}} \right)^{-1}$$

Where:



$$r_{i,t-j} = \frac{\text{Price}_{i,t-j}}{\text{Price}_{i,t-j-1}} - 1$$

$$\overline{r}_{i,t} = \frac{\sum_{j=0}^{259} r_{i,t-j}}{260}$$

$r_{i,t-j}$: The daily return of stock i in respect of the Business Day falling j Index BUSINESS DAYS immediately prior to SELECTION DAY t .

$\overline{r}_{i,t}$: The mean of the daily returns over 260 BUSINESS DAYS immediately prior to and including SELECTION DAY t .

$\text{Price}_{i,t-j}$: The CLOSING PRICE of stock i , in respect of the BUSINESS DAYS falling j BUSINESS DAYS immediately prior to SELECTION DAY t .

$\text{Price}_{i,t-j-1}$: The CLOSING PRICE of stock i , in respect of the BUSINESS DAYS falling $j + 1$ BUSINESS DAYS immediately prior to SELECTION DAY t .

“MODIFIED WEIGHTING SCORE”

$$S_i(Z_weight_{i,t}) = \text{Min}(1_{(Z_weight_{i,t} \geq 0)} \times (1 + Z_weight_{i,t}) + 1_{(Z_weight_{i,t} < 0)} \times \left(\frac{1}{1 - Z_weight_{i,t}} \right), 3)$$

Where:

$Z_weight_{i,t}$: Z-SCORE of INVERSE VOLATILITY of stock i on SELECTION DAY t .

$S_i(Z_weight_{i,t})$: The Modified Weighting Score of stock i on SELECTION DAY t .

$1_{(Z_weight_{i,t} \geq 0)}$: is equal to 1 if $Z_weight_{i,t}$ is greater than or equal to 0, and 0 otherwise.

$1_{(Z_weight_{i,t} < 0)}$: is equal to 1 if $Z_weight_{i,t}$ is strictly lower than 0, and 0 otherwise.

“**STOCK WEIGHT**” is the sum of the MODIFIED WEIGHTING SCORE of the stocks in the final selection.

$$\text{Stock Weight}_{i,t} = \frac{S_i(Z_weight_{i,t})}{\sum_{i=1}^{N_{tf}} S_i(Z_weight_{i,t})}$$

Where:

N_{tf} : The number of stocks which comprise the final selection on SELECTION DAY t .

“**AVERAGE TRADED VALUE**” of stock i over the last 22 BUSINESS DAYS immediately preceding and including SELECTION DAY t as defined below:



$$\text{average_tv}_{i,t} = \frac{1}{22} \sum_{j=0}^{21} (\text{volume}_{i,t-j} \times \text{price}_{i,t-j})$$

And:

price_{i,t-j}: means the CLOSING PRICE of security *i*, in respect of the BUSINESS DAY falling *j* BUSINESS DAYS immediately prior to SELECTION DAY *t* on the EXCHANGE.

volume_{i,t-j}: means the traded volume in number of shares of security *i* in respect of the BUSINESS DAY falling *j* BUSINESS DAYS immediately prior to SELECTION DAY *t* on the EXCHANGE.

“**LIQUIDITY FACTOR**” of stock *i* on SELECTION DAY *t*.

$$\text{liq_f}_{i,t} = \text{Min} \left[\frac{1}{4} \times \frac{\text{average_tv}_{i,t}}{\text{Stock Weight}_{i,t} \times \text{ref}_{\text{AUM}}}, 1 \right]$$

Where:

ref_{AUM}: means EUR 100,000,000.

“**FINAL WEIGHTS**” are calculated based on each security's LIQUIDITY FACTOR given by the following formula:

$$\text{final_tw}_{i,t} = \frac{\text{Stock Weight}_{i,t} \times \text{liq_f}_{i,t}}{\sum_{i=1}^{N_{tf}} (\text{Stock Weight}_{i,t} \times \text{liq_f}_{i,t})}$$

Where:

N_{tf}: The number of securities which comprise the final selection on SELECTION DAY *t*.

CONTACT

Solactive AG
German Index Engineering
Platz der Einheit 1
60327 Frankfurt am Main
Germany

Tel.: +49 (0) 69 719 160 00

Fax: +49 (0) 69 719 160 25

Email: info@solactive.com

Website: www.solactive.com

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