



GUIDEBOOK

The Ecofi SRI EUROPE Index (Net Return and Price Return)

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1. Introduction

The Ecofi SRI EUROPE Index (the “**Index**”) is designed to reflect the performance of a dynamic portfolio of thirty three equally weighted equity securities (each, a “**Stock**” and together, the “**Stocks**”) listed on various Europe-wide exchanges. The Index has been developed independently by Finvex acting as Index Sponsor (“**FINVEX**” or the “**Index Sponsor**”). The Index is calculated, administered and published by Solactive AG (“**Solactive**”) assuming the role as administrator (the “**Index Administrator**”) under the Regulation (EU) 2016/1011 (the “**Benchmark Regulation**” or “**BMR**”). The name “Solactive” is trademarked.

The thirty three Stocks are selected by FINVEX on a monthly basis from a socially responsible investment universe delivered by ECOFI research to FINVEX (the “**ECOFI SRI Universe**”) according to a non-discretionary approach on each Monthly Selection Date (as defined in section 2.1 below) and are listed on the exchange(s) of one of the Eligible Geography (as outlined in section 2.2 below) using a rules-based selection methodology designed by FINVEX.

The “**Selection Methodology**” (further described in sections 2.3, 2.4 and 2.5 below) will first rank all the Stocks forming the ECOFI SRI Universe by calculating a score for each Stock respectively, after applying a liquidity filter to the ECOFI SRI Universe. This score is determined by an analysis based on the value and quality associated to each Stock. Such score leads to the selection of two third of the initial ECOFI SRI Universe (the “**ECOFI SRI Universe Subset**” as defined further in section 2.2 below) which is formed by the top ranked equities according to this score. The ECOFI SRI Universe Subset is then ranked on the basis of different risk and risk concentration parameters that are derived from the compounded returns of such individual securities.

The Index objective is to reflect the performance of the thirty three Stocks within the ECOFI SRI Universe that meet the liquidity criteria, have the highest value and quality characteristics in conjunction with the lowest risk based on the selection methodology while maintaining a soft turnover, a sector constraint and a regional constraint.

The monthly selection of the Stocks within the ECOFI SRI Universe is undertaken by FINVEX.

FINVEX is a specialist research, portfolio construction and index design firm¹.

Ecofi Investissements, acting as Index Advisor, (“**ECOFI**” or the “**Index Constituents Advisor**”) is a subsidiary 100% owned by the Crédit Coopératif Group (“**Crédit Coopératif Group**”). As a banking group well established in the social economy, Crédit Coopératif Group is attentive to the needs expressed by all its customers (institutions, corporates, associations, foundations, federations, and public works companies) - as specific as they are, and is resolutely committed to provide useful and innovative financial services which combines sense and performance.

Solactive will act as administrator for the Index, calculation agent for the Index and organize the daily calculation and dissemination of the Index closing value.

¹ FINVEX S.A. has its registered offices at 11 rue des Colonies, 1000 Brussels, Belgium.



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 Guidebook) will be available at the website of the Index Administrator: <https://www.solactive.com/news/announcements/>.



2. Index composition process

2.1. *Selection and Review Dates*

The composition of the Index is reviewed on a monthly basis on the last Business Day of each month (the “**Monthly Selection Date**”). In case such date is not a London Business Day, the Monthly Selection Date will be the first following calendar day that is a London Business Day. The Index Administrator has outsourced the determination of the Stocks that will become constituents of the Index to FINVEX. Such outsourcing has been made in accordance with the requirements of the BMR (Article 10 BMR). The selection of the Stocks that will become constituents of the Index is fully rule-based and FINVEX cannot make any discretionary decision.

On each Monthly Selection Date, FINVEX will apply the selection methodology and determine the new Stocks that will become constituents of the Index (each, a “**New Index Constituent**”) as of the Rebalancing Date. This is carried out by implementing the shares as determined based on the weights calculated on the Monthly Selection Date. The Index rebalances three London Business Days following each Monthly Selection Date (each, a “**Rebalancing Date**”).

To ensure that the Index is always accurate and is calculated with the most up-to-date constituent data, the component data (i.e. Weighting Factor of each constituent Stock) of the Index is also reviewed on each Rebalancing Date by FINVEX and may be adjusted by the Index Administrator with effect from the next London Business Day.

For the purposes of this Guidebook, “**Business Day**” is with respect to the index constituents included in the index at the Rebalancing Date and every index constituent included in the index at the selection day immediately following the Rebalancing Date (for clarification: this provision is intended to capture the Business Days for the securities to be included in the index as new index constituent with close of trading on the London exchange on the Rebalancing Dates) a day on which the London exchange is open for trading (or a day that would have been such a day if a market disruption had not occurred), including 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 Business Day.

2.2. *ECOFI SRI Universe*

The **ECOFI SRI Universe** i.e. the stocks that are eligible for inclusion in the Index, is reviewed by ECOFI on each Monthly Selection Date according to a non-discretionary approach. It comprises all stocks that are, on such Monthly Selection Date:

- (1) among the largest 600 European stocks in terms of capitalization representing the European region (i.e. Austria, Belgium, Czech Republic, Denmark, Finland, France, Germany, Greece, Ireland, Italy, Luxembourg, the Netherlands, Norway, Portugal, Spain, Sweden, Switzerland and the United Kingdom)
- (2) stocks which, after each monthly ECOFI research review date, benefit from a strong ECOFI SRI corporate rating based on Vigeo and Sustainalytics environmental, social and governance (“**ESG**”)



rating data used in conjunction with a “two-filters” ECOFI internal screening process. The ECOFI internal screening process includes a proprietary methodology² based on:

- (i) an “ESG performance filter” calculated on the basis of Vigeo³ SRI ratings of companies;
- (ii) a “Controversies filter” on the basis of the negative incidents faced by those companies and rated by Sustainalytics.

This full screening process is rigorous, transparent and used in an attempt to go beyond usual information disclosed by companies and to select the best companies by comparing their rhetoric to the reality of their ESG performance via:

- a global assessment of ESG performance that focuses on:
 - the overweighting of quantitative ESG indicators (‘results’) of companies in the ESG performance filter (by opposition to qualitative indicators). For example: CO2 emissions per MWh for electricity providers, frequency and severity of employees working accidents etc.;
 - the overweighting of the so-called "ECOFI Touch" criteria, in line with Crédit Coopératif Group values: balance of powers at the Board of Directors, responsible relationships with customers and suppliers, fiscal responsibility, prevention of discrimination.
 - an evaluation of all controversies faced by companies. Controversies are significant negative incidents on ESG Issues such as pollution, corruption, money laundering, violations of human rights etc. They are rated from level 1 to level 5 (most severe incidents) by Sustainalytics.

The “ESG performance filter” is based on the global ECOFI ESG rating calculated with the monthly Vigeo SRI ratings of companies according to the following formula:

- **The main features of Vigeo analysis:**
 - Criteria that are based on internationally recognised standards;
 - Criteria applied in relation to their sector relevance;
 - Criteria considered according to the relative importance of the social responsibility objectives in the sector concerned.

Corporate social responsibility criteria are divided into **six fields or “domains”**:

- Human rights
- Human resources

² More information on the methodology can be obtained from the ECOFI website: <http://www.ecofi.fr/en/areas-expertise-engaged-portfolio-mgt/sri>

³ Vigeo SAS



- Environment
- Business behaviour
- Corporate governance
- Community involvement

Each of the 38 criteria coming from 6 different domains is analysed on the basis of three managerial “items”: Leadership, Implementation and Results.

Cf. <http://vigeo-eiris.com/about-us/methodology-quality-assurance/>

- **ECOFI Global ESG rating** covers three domains: **Environmental, Social and Governance**.

It is based on Vigeo ratings of companies’ performances in 6 domains: Environment (ENV), Human Resources (HR), Human Rights (HRts), Community Involvement (CIN), Business Behaviour (C&S), Corporate Governance (CG). (cf. Supra)

ECOFI Global ESG Rating per domain	Vigeo 6 domains	Weighting in ECOFI Global ESG rating	ECOFI ESG « Results » rating
Environment (E)	Environment (Env)	33%	75% « ENV score » + 25% « ENV Results-score »
Social (S)	Human Resources (HR)	11%	75% « HR score » + 25% « HR Results-score »
	Human rights (HRts)	11%	75% « HRts score » + 25% « HRts Results-score »
	Community Involvement (CIN)	11%	75% « CIN score » + 25% « CIN Results-score »
Governance	Business Behaviour (C&S)	17%	75% « C&S score » + 25% « C&S Results-score »
	Corporate Governance (CG)	17%	75% « CG score » + 25% « CG Results-score »

- **“ECOFI ESG « Results » rating” overweights the rating of Vigeo “Results” indicators:** those are quantitative indicators by opposition to the qualitative indicators of the “Leadership” and “Implementation” items (cf. Supra). Example: CO2 emissions by opposition to the climate change policy of the company analysed.

ECOFI ESG Results = 70 % of ECOFI Global ESG rating.

- **“ECOFI Touch rating” overweights the rating of five specific Vigeo indicators in line with Crédit Coopératif values:**
 - CG 1.1 - Board of Directors
 - HRts 2.4 - Non-discrimination
 - C&S 1.3 - Responsible Contractual Agreement (or C&S1.2 : Information to customers when C&S 1.3 is not activated for the company sector)



- C&S 2.2 - Sustainable Relationships with suppliers
- BGT2.1 - Tax heavens

ECOFI Touch = 30 % of ECOFI Global ESG rating.

ECOFI Global ESG rating (/10) = 70 % ECOFI ESG Results rating + 30 % ECOFI Touch rating

ECOFI Global ESG rating of companies =

- **70% of «ECOFI ESG RESULTS rating» = (33%(75% Vigeo ENV rating + 25% Vigeo ENV Results rating) + 11%(75% Vigeo HR rating + 25% Vigeo HR Results rating) + 11%(75% Vigeo HRts rating + 25% Vigeo HRts Results rating)+ 11%(75% Vigeo CIN rating + 25% Vigeo CIN Results rating) + 17%(75% Vigeo BB rating + 25% Vigeo BB Results rating) + 17%(75% Vigeo CG rating + 25% Vigeo CG Results rating))**
- **30% of «ECOFI TOUCH rating» = (20%CG1.1 + 20%HRt2.4 + 20%C&S1.3 + 20%C&S2.2+20%BGT2.1)**

- **Companies are ranked according to their ECOFI Global ESG rating.**
- **The 300 companies with the highest ECOFI Global ESG rating are eligible to the ECOFI SRI universe⁴.**

The “Controversies filter” is based on the ranking of controversies faced by companies, by Sustainalytics, from level 1 to level 5.

- **Companies are excluded from the ECOFI SRI universe when they face controversies rated level 4 or 5 by Sustainalytics.**

⁴ If within the remaining 300 companies, i.e. with the lowest ECOFI Global ESG rating, companies have an ECOFI Global ESG rating equal to the one of selected companies; these companies will also be eligible to the ECOFI SRI universe.



2.3. Application of a Liquidity filter

On each Monthly Selection Date, FINVEX shall firstly apply a liquidity filter to the ECOFI SRI Universe.

All the securities whose **liquidity measure** is below a liquidity threshold set to EUR 15 million equivalent are excluded from the universe. The **liquidity measure** is computed as the lowest 25 percentile of the daily turnover during the 6 months prior to the Monthly Selection Date. The turnover is defined as $turnover = \sum_{transactions\ of\ the\ day}(number\ of\ stocks\ traded\ x\ transaction\ price)$.

In the event that the application of the liquidity filter reduces the ECOFI SRI Universe to below 100 securities, FINVEX will relax the liquidity threshold to ensure that 100 securities are part of the remaining universe. It will do so by relaxing the liquidity constraint by lowering the threshold by steps of 10% to ensure that at least 100 securities are part of the remaining universe.

2.4. Application of a Value & Quality filter

On each Monthly Selection Date, after the application of the liquidity filter, the remaining universe of securities is secondly filtered by so-called “**Value**” and “**Quality**” factors, with the purpose to create a more homogeneous subset of securities. For each security, an aggregated value and quality score (the “**Aggregated Value & Quality Score**”) is computed:

Aggregated Value & Quality Score = 75% Value Score + 25% Quality Score

- **Value Score** = 33.33% P/B + 33.33% PE + 33.33% EV/EBITDA ⁵

With - P/B: Ratio of the price of each Stock (P) and the company’s Book Value per Share (B/V), last filling;

- P/E: Ratio of the price of each Stock (P) to the company’s Earnings per Share (E), trailing 12 months;

- EV/EBITDA: Ratio calculated by dividing the Enterprise Value (EV) of each Stock and the company’s Earnings Before Interest, Taxes, Depreciation and Amortization (EBITDA), last filling.

- **Quality Score** = 33.33% ROE + 33.33% EV + 33.33% FINLEV⁶

⁵ Book Value per Share corresponds to a measure used by owners of common shares in a company to determine the level of safety associated with each individual share after all debts are paid accordingly and is calculated as: Total Common Equity / Number of Shares Outstanding.

Earnings per Share corresponds to the portion of a company’s profit allocated to each outstanding share of common stock. Earnings per share serves as an indicator of a company’s profitability and is calculated as: Net Income – Dividends on Preferred Stock / Average Outstanding Shares.

Enterprise Value corresponds to a measure of a company’s theoretical takeover price. It is calculated as: Market Capitalization + Preferred Equity + Minority Interest + Total Debt - Cash & Equivalents – Adjustments.

EBITDA is an indicator of a company’s financial performance which is essentially net income with interest, taxes, depreciation, and amortization added back to it. EBITDA can be used to analyze and compare profitability between companies and industries because it eliminates the effects of financing and accounting decision.

⁶ Return on Equity corresponds to a measure of a corporation’s profitability by revealing how much profit a company generates with the money shareholders have invested, in percentage. It is calculated as Net Income Available for Common Shareholders, trailing 12 months (i.e. Net Income - Total Cash Preferred Dividend - Other Adjustments) / Average Total Common Equity (i.e. Share Capital & APIC + Retained Earnings and Other Equity).

Earnings Variability measures the amount of dispersion of a company’s Earnings per Share, trailing 12 months over the last 4 years.

Financial Leverage corresponds to the degree of which a company uses fixed-income securities such as debt and preferred equity. It is calculated as: Average Total Assets (i.e. the total of all Short and Long-term Assets as reported on the Balance Sheet, on



With - ROE: Company's Return on Equity, last filling;
- EV: Company's Earnings Variability, trailing 12 months;
- FINLEV: Company's Financial Leverage, last filling.

The remaining universe is split into 4 European sub-regions being:

1. UK and Ireland;
2. Nordic countries (Denmark, Finland, Norway, Sweden);
3. Switzerland;
4. Core Europe (countries other than in sub-regions 1 to 3);

For each sub-region, one third of the securities, with the lowest Aggregated Value and Quality Score, are removed from the remaining universe.

At the end of this process, a subset of two thirds of the initial ECOFI SRI Universe (the "**Subset**") is formed by securities that offer the best value and quality parameters.

2.5. Selection Process

The Stocks that will become the New Index Constituents are selected from the Subset. This selection process is based on a ranking of the Subset from different risk parameters, while targeting 33 stocks with the following constraints:

1. the number of stocks by region must represent between 40% and 133% of the market capitalization of that region,
2. a sector concentration cap of 25% maximum per sector of the universe (i.e. maximum 9 stocks out of the 33 stocks in a single sector);
3. a soft turnover constraint: target retention constraint of 95% of the stocks between rebalancings (i.e. authorizing the rebalancing of 2 stocks per month);

Purpose of this final step of the periodic review is to create, from a risk perspective, a diversified subset of securities, or final portfolio (the "**Final Portfolio**") based on a so-called aggregated risk score (the "**Aggregated Risk Score**").

A linear programming process is applied to find the portfolio of 33 stocks with the lowest Aggregated Risk Score while respecting the constraints above.

The optimization process occurs in the order below:

- (A) Find a solution respecting constraints (1), (2) and (3) above;
- (B) In case no solution is found in (A), the constraint (3) is fully relaxed and constraints (1) and (2) are kept;

average between the beginning of a period balance and the ending of the same period balance) / Average Total Common Equity (i.e. Share Capital & APIC + Retained Earnings and Other Equity).



- (C) In case no solution is found in (A) and (B), constraints (2) and (3) are fully relaxed and constraint (1) is kept;
- (D) In case no solution is found in (A), (B) or (C), all constraints are fully relaxed;

The solution will provide thirty three (33) stocks which will become the New Index Constituents.

The Aggregated Risk Score is calculated as follows:

$$\text{Aggregated Risk Score} = 33.33\% * ER + 33.33\% * DR + 33.33\% * CR$$

With:

- 1) Extreme Risk Score (ER):** a measure of the level of the financial risk undertaken by the company, i.e. the Modified Cornish Fisher VaR (Value at Risk).

The Modified Cornish Fisher VaR (the “**Modified VaR**”) takes the higher moments of non-normal distributions (skewness, kurtosis) into account through the use of a Cornish Fisher expansion, and collapses to standard (traditional) mean-VaR if the return stream follows a standard distribution.

The Modified VaR is calculated as follows:

$$\text{Modified VaR} = \text{Mean}(R) - \text{sqrt}(\text{Sigma}) * z$$

$$z \text{ (i.e. Quantile } f) = z_q + ((z_q^2 - 1) S)/6 + ((z_q^3 - 3z_q) K)/24 + ((2z_q^3 - 5z_q) S^2)/36;$$

z_q Quantile of the Standard Normal Distribution;

Quantile 95% quantile of the negative returns;

R time series of the compounded daily total returns nets of stocks for 365 calendar days (up to and including the observation immediately prior to the Monthly Selection Date);

S Skewness of R

K Excess Kurtosis of R

Sigma Annualized volatility over 365 calendar days (up to and including the observation immediately prior to the Monthly Selection Date)

Extreme Risk Score is used in an attempt to ensure that risks are not taken beyond the level at which the company can absorb the losses of a probable worst outcome.

- 2) Downside Risk Score (DR):** a measure, for a given security, of the fluctuations of returns below the mean, i.e. the Semi-Deviation.

The Semi-Deviation is a specific form of downside deviation calculation. It is set equal to

$\sqrt{\frac{1}{n} \sum_{r < \text{mean}} (r - \text{mean})^2}$, with r being the security’s daily returns, mean , the average daily return and n , the number of daily returns observations below the mean over 365 calendar days (up to and including the observation immediately prior to the Monthly Selection Date).

Downside Risk Score allows assessing how much loss can be expected from a portfolio, instead of only looking at its expected fluctuations.



3) Concentration Risk Score (CR): a measure of the individual risk contribution of each security to a portfolio (or a benchmark), i.e. the Betacovariance.

The Betacovariance assesses the potential diversification of an asset relative to a portfolio (or a benchmark) via an estimation of how much portfolio risk will be impacted by adding an asset, in terms of symmetric risk (i.e. volatility or the statistical measure of the dispersion of returns for a given security). The Betacovariance is calculated as follows:

$$\text{BetaCov}(r, r_{\text{bench}}) = \text{Cov}(r, r_{\text{bench}}) / \text{Var}(r_{\text{bench}})$$

i.e. the ratio between the degree of which security's returns and benchmark returns move in tandem ($\text{cov}(.,.)$) and the measure of the dispersion of security's returns from the mean ($\text{var}(.)$).

2.6. Weighting factors

To ensure that all Stocks in the Index are appropriately weighted and these changes are subsequently reflected in the resulting component weights, the weighting factors for each Stock in the Index are reset at the close of business of each Rebalancing Date.

The weighting factors are set so that each New Index Constituent is equally weighted.

2.7. The Index Committee

The Index committee (the “**Committee**”) will be composed of staff from Solactive and its subsidiaries.

The 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 Guidebook, must be submitted to the 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/>.

In addition, the Committee will review the methodology of the Index without any discretion to change such methodology. Changes to the index methodology can only be undertaken if required by regulations, regulators or in case of force majeure.

The Committee may in exceptional circumstances and other situations of force majeure revise the Index methodology and will publish any such changes and revisions. Exceptional circumstances include (but are not restricted to):

- Continuous adverse trading conditions (e.g. collapse in trading volume of a single Stock or a whole exchange or the whole equity market);
- Trading restrictions imposed by exchanges or regulators (other than those addressed in the Solactive Disruption Policy, as specified in Section 3.4);
- Restricted access or suspension of information on the ECOFI SRI Investment Universe and its constituents.



2.8. Role of parties

ECOFI will provide FINVEX on each Monthly Selection Date with the ECOFI SRI Universe defined in Section 2.2.

FINVEX will submit to the Index Administrator the New Index Constituents and the Target Weight per New Index Constituent no later than one London Business Day following each Monthly Selection Date.

One Business Day prior to each Rebalancing Date, the Index Administrator will determine the Weighting Factors for each New Index Constituent.

The Index Administrator is responsible for fixing and updating the calendar of the Rebalancing Dates, the maintenance of the Index, calculating the Index value, and its dissemination on each end of day (EST) Monday through Friday (except if all exchanges of the underlying constituents are closed).

FINVEX and ECOFI will ensure that the composition of the Index complies with the publicly available ESMA's guidelines on the eligibility of financial indices for UCITS.



3. Calculation Methodology and Ongoing maintenance

3.1. Calculation Model

The Index is calculated as a net total return and adjusted return index following the Solactive Equity Index Methodology, which is available on the Solactive website: <https://www.solactive.com/documents/equity-index-methodology/>.

Two versions of the Index are available as follows:

- Ecofi SRI EUROPE Net Return Index EUR (Bloomberg® code: EISRIEIR Index)
- Ecofi SRI EUROPE Price Index EUR (Bloomberg® code: EISRIEI Index)

The Ecofi SRI EUROPE Net Return Index is a total return net index: the value of the proceeds of dividends paid in respect of each constituent Stock, after deduction of any applicable withholding tax, is reinvested in the Index according to the divisor formula and following the Solactive Equity Index Methodology .

The Ecofi SRI EUROPE Price Index is a adjusted price index: it replicates synthetically the value of an index which does not reinvest the proceeds of the dividends. It is based on the value of the Ecofi SRI EUROPE Net Return Index less a fixed dividend yield of 4% per annum following the Solactive Equity Index Methodology.

The Index value will be rounded to two decimal places. Prices of Index Constituents and foreign exchange rates will be rounded to six decimal places.

3.2. Corporate actions and adjustments

In addition to the periodic reviews, the Index is also continually reviewed for corporate events which may affect the Stocks comprising the Index. Such events have a material impact on the price, weighting or overall integrity of Index Constituents. 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. The Index Administrator considers the following, but not conclusive, list of corporate actions as relevant for 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

As a result of such events, an adjustment of the Index may be necessary between two regular periodic reviews and may have to be done in relation to an Index Constituent and/or may also affect the number of Index Constituents and/or the weighting of certain Index Constituents.

Adjustments to the Index to account for corporate actions will be made in compliance with the Equity Index Methodology, which is incorporated by reference and 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 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 will announce the Index adjustment giving a notice period of at least two London Business Days (with respect to the affected Index Constituent) 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.

3.3. Recalculation

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

3.4. Market Disruption

In periods of market stress Solactive calculates the Index following predefined and exhaustive arrangements as described in the Solactive Disruption Policy, which is incorporated by reference and available on the Solactive website: <https://www.solactive.com/documents/disruption-policy/>. Such market



stress can arise due to a variety of reasons, but generally results in inaccurate or delayed prices for one or more Index Constituents. The determination of the Index may be limited or impaired at times of illiquid or fragmented markets and market stress.



4. Miscellaneous

4.1. *Discretion*

Any discretion which may need to be exercised in relation to the determination of the Index shall be made in accordance with strict rules regarding the exercise of discretion or expert judgement.

4.2. *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 Guidebook.

4.3. *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.

4.4. *Termination*

Solactive makes the greatest possible efforts to ensure the resilience and continued integrity of the Index over time. Where necessary, Solactive follows a clearly defined and transparent procedure to adapt the Index methodology to changing underlying markets (see Section 4.2 “Methodology Review”) in order to maintain continued reliability and comparability of the Index. 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/>.



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