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## GUIDEBOOK

### The FINVEX Sector Efficient Europe 30 Index (Net Return, Effective Price and Price Return)

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## 1. Introduction

The FINVEX Sector Efficient Europe 30 Index (the “**Index**”) is designed to reflect the performance of a dynamic portfolio of thirty equally weighted equity securities (each, a “**Stock**” and together, the “**Stocks**”) listed on various Europe-wide exchanges. 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 Stocks are selected on a quarterly basis from a European large cap Investment Universe (as defined in section 2.2 below) (the “**Investment Universe**”) on each Quarterly Selection Date (as defined in section 2.1 below) that are listed on a European selected stock exchange (as defined in section 2.2 below) using a rules-based selection methodology designed by FINVEX acting as Index Sponsor (“**FINVEX**” or the “**Index Sponsor**”)¹.

This “**Selection Methodology**” will first determine 10 mutually exclusive Equity Sectors (“**Equity Sectors**”) as defined in more detail below sub section 2.3. and rank them by calculating a score for each Equity Sector respectively. The score is determined by an analysis based on the risk, value and momentum associated to each Equity Sector. Such score leads to the selection of the 4 top ranked Equity Sectors (“**Top Sectors**”) among the 10 Equity Sectors. The Index objective is to reflect the performance of the thirty Stocks within the Investment Universe that meet the liquidity criteria and have the lowest risk characteristics based on the Selection Methodology within all 10 Equity Sectors subject to having at least 80% belonging to the Top Sectors.

The Index has been developed independently by FINVEX.

The quarterly selection of the Stocks within the Investment Universe is undertaken by FINVEX.

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.

The Index is published on the website of the Index Administrator ([www.solactive.com](http://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/>.

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¹ FINVEX is a specialist research, portfolio construction and index design firm. Its registered offices are based Rue des Colonies 11, 1000 - Brussels, Belgium.

¹ REFINITIV is a global provider of financial markets data and infrastructure (formerly known as “Thomson Reuters”).



## 2. Index composition process

### 2.1. Selection and Review Dates

The composition of the Index is selected and reviewed on a quarterly basis on the last Business Day of each January, April, July and October (the “**Quarterly Selection Date**”). In case such date is not a London Business Day, the Quarterly 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 Quarterly 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 Quarterly Selection Date. The Index rebalances three London Business Days following each Quarterly 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 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. Creation of an *Investment Universe*

On the Quarterly Selection Date an “**invited universe**” is defined as all the companies listed on a Selected Stock Exchange<sup>2</sup>.

All companies in the “invited universe” are ranked according to Free Float Market Capitalization in descending order. All companies ranked from 1 to 600 are added to the “**Eligible Investment Universe**”

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<sup>2</sup> Comprises the following exchanges as at the date of this document: Bolsa de Madrid (Madrid Stock Exchange), Borsa Italiana, Copenhagen Stock Exchange, Euronext Amsterdam, Euronext Brussels, Euronext Lisbon, Euronext Paris, Frankfurt Stock Exchange (Frankfurt, Xetra), Helsinki Stock Exchange, Irish Stock Exchange, London Stock Exchange, Milan Stock Exchange, Nasdaq OMX Copenhagen A/S, Nasdaq OMX Helsinki Ltd, Nasdaq OMX Iceland Hf, Nasdaq OMX Stockholm AB, Oslo Bors ASA, SIBEX, SIX Swiss Exchange, Stockholm Stock Exchange, Vienna Stock Exchange, Virtex, Warsaw Stock Exchange, XETRA Vienna



### 2.3. Sector Selection Process

Stocks in the Investment Universe are arranged into 10 “Sectors” by the TRBC Economic Sector classification.

For each Sector a value score is computed as follow:

-For each liquid stock in a given sector we compute the ratio of the last Price to book divided by its 12 months average. We do the same for the Price earning and price to cash flow ratios.

-We compute the median for each of the 3 measure across all liquid stocks in this given sector

-The value score is the average of the 3 medians

-This value score is z-scored across the sectors

For each Sector a momentum score is computed using the Thomson Reuters Europe sectorial indices total return. The score is the cumulative total return computed other 365 calendar days excuding the last 30 calendar days. This value score is z-scored across the sectors

For each Sector a risk score is computed using the Thomson Reuters Europe sectorial indices total return. The score is arithmetic average of the z-scores of the Downside risk (i.e. the Semi-Deviation - see definition below), the Modified Cornish Fisher VaR (see definition below) and the BetaCovariance (vs Thomson Reuters Europe Total return index).

The stocks from the 2 sectors with the worst momentum are excluded from the eligible universe.

We compute the return of the Long-Short Portfolios based on the value and risk scores for the last 3 quarters.

The 4 sectors with the best value scores are added to the long leg, the 4 sectors with the worst value scores are added to the short leg. The same approach is applied for the Risk Score. A predictability factor is assigned based on the stability of the returns of the long short portfolio.

An aggregated sector score is computed for each sector based on the predictability associated to each factor and on the level of each factor scores (Value and Risk).

The 4 top ranked Sectors among the 10 Sectors are selected to become the “Top Sectors”.

#### Definitions:

The Semi-Deviation is a specific form of downside deviation calculation. The compounded daily total returns net of stocks that are less than the MAR (or Minimum Acceptable Returns) are extracted from R, and the differences of those to the MAR are taken. Then, the squares of the differences are summed up and divided by n (as defined below) to get a below-target semi-variance. The Semi-Deviation is calculated as follows:

$$\text{Semi-Deviation} = \sqrt{\frac{\sum_{t=1}^n (R_t - \text{MAR})^2}{n}}$$

“R” is the time series of the compounded daily total returns

“MAR” =mean(R);

“n” is the number of observations of daily returns below MAR included over 365 calendar days (up to and including the observation immediately prior to the Quarterly Selection Date).



The Modified Cornish Fisher 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

$$\text{ModVaR} = -\text{mean}(R) - \sqrt{\text{Sigma}} * z_{\text{Quantile}_f}$$

$$z_{\text{Quantile}_f} = z_q + [(z_q^2 - 1)S]/6 + [(z_q^3 - 3z_q)K]/24 - [(2z_q^3 - 5z_q)S^2]/36;$$

“**z<sub>q</sub>**” is the Quantile of the standard normal distribution;

“**Quantile**” is the 95% quantile of the negative returns;

“**R**” is the time series of the compounded daily total returns net of stocks for 365 calendar days (up to and including the observation immediately prior to the Quarterly Selection Date);

“**S**” is the skewness of R;

“**K**” is the excess kurtosis of R.

“**Sigma**” is the annualised volatility over 365 calendar days (up to and including the observation immediately prior to the Quarterly Selection Date).

The Betacovariance assesses the potential diversification of an asset relative to a portfolio (or a benchmark). The higher moment beta estimates how much portfolio risk will be impacted by adding an asset in terms of symmetric risk (i.e. volatility). It shows that adding an asset to a portfolio will reduce the portfolio's variance to be reduced if the second-order beta of the asset with respect to the portfolio is less than one.

The Betacovariance is calculated as follows:

$$\text{BetaCoV}(R_a, R_b) = \text{CoV}(R_a, R_b) / \text{var}(R_b)$$

“**R<sub>a</sub>**” is the time series of the compounded daily total return net over the last 365 calendar days prior to the Selection Date; “**R<sub>b</sub>**” is the time series of the daily compounded returns of the Investment Universe, over the same period.

## 2.4. Application of a Liquidity filter

On each Quarterly Selection Date, first a liquidity filter is applied to the Investment Universe.

All the securities whose **liquidity measure** is below a liquidity threshold set to EUR 10 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 Quarterly Selection Date. The turnover is defined as  $turnover = \sum_{\text{transactions of the day}} (\text{number of stocks traded} \times \text{transaction price})$ .

In the event that the application of the liquidity filter reduces the Investment Universe less than 200 securities, the Index Sponsor will relax the liquidity threshold to ensure that at least 200 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 200 securities are part of the remaining universe.



## **2.5. The Stocks Selection Process**

After the application of the Liquidity filter, 30 stocks are selected that offer the best risk characteristics subject to the constraints below:

- At least 80% of New Index Constituents belong to the Top Sectors (hard constraint);
- At least 10% of New Index Constituents belong to each of the Top Sectors (soft constraint);

These 30 Stocks become the “**New Index Constituents**”.

## **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, 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 Investment Universe and its constituents.

## **2.8. Role of parties**

The Index Sponsor will submit to the Index Administrator the New Index Constituents, the Target Weight per New Index Constituent and the Reserve List no later than one London Business Day following each Quarterly 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 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 price return, 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/>.

Three versions of the Index are available as follows:

- FINVEX Sector Efficient Europe 30 Net Return Index in EUR (Bloomberg® code: [FSECEUER])
- FINVEX Sector Efficient Europe 30 Price Index in EUR (Bloomberg® code: [FSECEUE])
- FINVEX Sector Efficient Europe 30 Effective Price Index in EUR (Bloomberg® code: [FSECEUEP])

The FINVEX Sector Efficient Europe 30 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 into the Index according to the divisor formula and following the Solactive Equity Index Methodology.

The FINVEX Sector Efficient Europe 30 Price Index is an adjusted return 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 FINVEX Sector Efficient Europe 30 Net Return Index less a fixed dividend yield of 4.5% per annum following the Solactive Equity Index Methodology.

The FINVEX Sector Efficient Europe 30 Effective Price Index is a price index: it replicates the value of an index which does not reinvest the proceeds of the dividends.

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 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/>.



## 5. Disclaimer

The Index Sponsor and the Index Administrator make no express or implied representation or warranty concerning : (i) the accuracy or completeness of this Index Guidebook, (ii) whether or not the Index may achieve any particular level or meet or correlate with any particular objective or (iii) the fitness for any purpose of the Index or this Index Guidebook.

The Index Sponsor and the Index Administrator accept no liability resulting from the willful negligence, fraud, or default of any person in connection with (i) this Index Guidebook and (ii) its publication and dissemination of the Index.

While the Index Administrator and the Index Sponsor will make reasonable efforts to ensure the accuracy of the composition, calculation and adjustment of the Index in accordance with this Index Guidebook, the Index Administrator and the Index Sponsor shall have no liability in the back-dated calculation prior to the launch date or in relation to any index calculation for any error, omission, suspension or interruption in calculating the Index. The Index Administrator does not make any warranties, express or implied, to the Index Sponsor, any of its customers or anyone else regarding the Index, including, without limitation, any warranties with respect to the timeliness, sequence, accuracy, completeness, correctness, merchantability, quality or fitness for a particular purpose or any warranties as to the results to be in connection with the use of the Index.

Neither the Index Administrator nor the Index Sponsor are under obligation to continue the calculation, publication or dissemination of the Index and cannot be held liable for any suspension or interruption in the calculation, dissemination and publication of the Index.

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This Index Guidebook contains no provisions relating to any product referencing the Index. Should any product referencing the Index be issued, created, sold or otherwise distributed, provisions relating to a possible liability with respect to such product will be dealt with in a separate document.

The FINVEX Sector Efficient Europe 30 Net Return Index, the FINVEX Sector Efficient Europe 30 Effective Price Index and the FINVEX Sector Efficient Europe 30 Price Index are proprietary indices of FINVEX. Any use of these indices or their name must be with the consent of FINVEX.

Past performance does not guarantee future results and potential investors should not rely on any past performance of the Index as a guarantee of future performance of the Index. FINVEX shall not be liable (whether in negligence or otherwise) to any person for any error in the Index and shall be under no obligation to advise any person of any error therein.