

SGI Sector Efficient Europe 30 Index

Index Rules

Version as of the 30th November 2020

1. Index Summary Description:

1.1 Index Description

The SGI Sector Efficient Europe 30 Index (the “**Index**”, displayed on the Bloomberg ticker SGMDSEEP <Index> with an Index launch date on the 3rd December 2020 (the “**Index Launch Date**”)) aims to capture the performance of a basket of stocks (each, an “**Index Component**”, together, the “**Portfolio**” or “**Index Composition**”).

The Index is calculated and published on a daily basis (each such day of calculation, a “**Business Day**”) by S&P Opco, LLC (a subsidiary of S&P Dow Jones Indices LLC) (the “**Index Calculation Agent**” and the level calculated, the “**Index Level**”) and is sponsored by Société Générale (the “**Index Sponsor**”).

The Index is calculated end-of-day.

Main Characteristics

Bloomberg ticker:	SGMDSEEN <Index> : Net total Return SGMDSEEP <Index> : Net total Return with synthetic dividend
Type of Return:	Net Total Return
Calculation Frequency:	Daily
Publication Time:	End of Day
Index Launch Date:	3 rd December 2020
Currency:	EUR
Fees and Costs:	As specified under the “Index Fees and Costs” section below
Asset Class:	Equity
Index Components:	Equity Instrument and Market Data

1.3 Index Fees and Costs

The Index is calculated net of the following fees and costs:

Synthetic dividend:	4.5% p.a
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2. Index Rules:

Unless otherwise defined herein, each term used herein shall have the meaning ascribed to such term in the SGI Global Index Methodology.

2.1 Methodology applicable

The Index is computed and maintained pursuant to the Standard Formula as specified in the S&P General Index Guideline (the “**S&P Index Guideline**”), available at <http://www.spglobal.com/>, and these Index Rules which incorporate by reference the SGI Indices Global Methodology (version dated 20 July 2020, as supplemented, amended and restated or replaced from time to time, the “**SGI Global Methodology**”). The SGI Global Methodology is published on the SGI website under the link “SGI Cross Asset Methodology” at <https://sgi.sgmarkets.com>. These Index Rules should be read together with the SGI Global Methodology.

Capitalized terms used but not defined herein shall have the respective meanings ascribed to such terms in the SGI Global Methodology.

In the event of any inconsistency between the SGI Global Methodology and the S&P Index Guideline, the SGI Global Methodology will prevail.

In the event of any inconsistency between these Index Rules and the SGI Global Methodology or the S&P Index Guideline, these Index Rules will prevail.

The SGI Global Methodology shall be reviewed at least annually and is expected to be updated and revised from time to time where necessary or desirable, pursuant to legal developments and for the purpose of enhanced disclosure and technical improvement. The Index Sponsor may also act in good faith and a commercially reasonable manner to amend the SGI Global Methodology in order to cure ambiguities, errors and omissions thereunder. SGI Global Methodology subsequently updated and revised shall be (i) approved in accordance with the Index Sponsor’s internal index procedures, (ii) announced under the heading “News” on the SGI website <https://sgi.sgmarkets.com> and (iii) published in full on such SGI website under the link “SGI Cross Asset Methodology”; upon such publication, the updated SGI Global Methodology shall apply to the Index and these Index Rules.

2.2 Terms and definitions relating to the dates

Business Day	means any Scheduled Business Day on which no Index Disruption Event exists.
Index Launch Date	means the 3 rd December 2020
Rebalancing Date	means in respect of a Review Date, the 3 rd London Business Day following such Review Date, subject to that day being a Europe Business Day.
Review Date	means the last Business Day of each January, April, July, October. In case such date is not a London Business Day, the Review Date will be the first following calendar day that is a London Business Day
Scheduled Business Day	means any day on which at least one component is open
London Business Day	means a day on which commercial banks and foreign exchange markets settle payments and are open for general business (including dealings in foreign exchange and foreign currency deposits) in London.

Europe Business Day	means a day on which commercial banks and foreign exchange markets settle payments and are open for general business (including dealings in foreign exchange and foreign currency deposits) in all of the following countries simultaneously: Austria, Belgium, Czech Republic, Denmark, Finland, France, Germany, Greece, Ireland, Italy, Luxembourg, the Netherlands, Norway, Portugal, Spain, Sweden, Switzerland and the United Kingdom.
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2.3 Terms and definitions relating to the Index

Index	means the SGI Sector Efficient Europe 30 Index.
Index Calculation Agent	means S&P Opco, LLC (a subsidiary of S&P Dow Jones Indices LLC).
Index Component	means any Basket Component and Market Data
Index Currency	EUR
Index Level	means in respect of any Business Day (t), the level of the Index calculated and published by the Index Calculation Agent on such date at the Valuation Time, in accordance with the Index Rules.

2.4 Terms and definitions relating to the Basket Components

Basket Component	means any component of the Underlying Basket.
Basket Component Currency	means in respect of a Basket Component, its default currency.
Basket Component Type	means, in respect of a Basket Component, its type.
Basket Component Weight	means in respect of a Basket Component and Business Day, the weight (expressed in percentage) of such Basket Component in the Underlying Basket.
Closing Price	means in respect of a Scheduled Business Day, the official closing price of the share of such Company at the Scheduled Closing Time (or the Scheduled Closing Time on the Scheduled Trading Day preceding the Scheduled Business Day, as the case may be).
Company	means in respect of a Share the issuer of such Share.
Equity Instrument	means a Share or any other similar instrument specified in the Index Rules.
Exchange Business Day	means, in respect of a Basket Component (or, in the case of a basket of Basket Components, each Basket Component observed separately) any Scheduled Trading Day on which each relevant Exchange and Related Exchange are open for trading during their respective regular trading sessions, notwithstanding any such Exchange or Related Exchange closing prior to its Scheduled Closing Time.

Exchange(s)	means, in respect of a Basket Component, each exchange or quotation system (if applicable) on which such instrument (or the securities or instruments underlying such instrument in the case of an Underlying Index) trade, any successor exchange or quotation system or any substitute exchange or quotation system to which trading in such instrument (or the securities or instruments underlying such instrument in the case of an Underlying Index) has relocated.
Hypothetical Replicating Party	means a hypothetical party investing in the Index Components for the purposes of hedging products linked to the performance of the Index.
Related Exchange(s)	means, in respect of a Basket Component, each exchange or quotation system where trading has a material effect on the overall market for futures and options contracts relating to such instrument (or the securities or instruments underlying such instrument in the case of an Underlying Index), any successor exchange or quotation system or any substitute exchange or quotation system to which trading in futures or options contracts relating to such instrument (or the securities or instruments underlying such instrument in the case of an Underlying Index), has temporarily relocated.
Scheduled Closing Time	means in respect of an Exchange or Related Exchange, the scheduled weekday closing time of such Exchange or Related Exchange, without regard to after hours or any other trading outside of the regular trading session hours.
Scheduled Trading Day	means, in respect of a Basket Component, (or, in the case of a basket of Basket Components, in respect of each Basket Component observed separately) any day on which each Exchange and each Related Exchange for such Basket Component are scheduled to be open for trading for their respective regular trading sessions.
Share	means an ordinary share of a Company.

2.5 Terms and definitions relating to the Market Data

Forex	means in respect of a Basket Component and a Business Day, the foreign spot exchange rate to convert in the Index Currency one unit of the Basket Component Currency obtained using the WM Reuters as displayed on the relevant Reuters page on such Business Day, or any successor service or page for the purpose of displaying such foreign spot exchange rate, as determined by the Index Calculation Agent after instruction from the Index Sponsor, or the latest WM Reuters rate if no such rate is published as of such date.
Market Data	means a rate (including an interest rate, a foreign exchange rate or a swap rate), a spread, or any other data specified in the Index Rules (including any rate specified in this section 2.3 and) or any other similar instrument specified in the Index Rules

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3. Review of the Index Components:

3.1 Review Dates :

The composition of the Index is 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. On each Quarterly Selection Date, the Index Sponsor 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, and will send these to the Index Calculation Agent as per below schedule:

Review Date + 1 London business day	SGI will perform the component selection and will send S&P Dow Jones the new index constituents, target weights by the close of business.
Review Date + 2 London business day	S&P Dow Jones will process the changes and announce the new index constituents and weights after the close of trading via a proforma file. S&P Dow Jones will screen the new index constituents for any upcoming corporate actions that may impact the rebalance and result in a potential mandatory deletion during or immediately following the rebalance date.
Review Date + 3 London business days	The new index constituents and weights will be implemented after the close of trading.

The Index rebalances three London Business Days following each Quarterly Selection Date (each, a “**Rebalancing Date**”), subject to that day being a Europe Business Day. If that day is not a Europe Business Day then the Rebalancing Date will be the first following calendar day that is a London and Europe Business Day.

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 Calculation Agent with effect from the next London Business Day.

For the purposes of this Guidebook, “**London Business Day**” means a day on which commercial banks and foreign exchange markets settle payments and are open for general business (including dealings in foreign exchange and foreign currency deposits) in London and “**Europe Business Day**” means a day on which commercial banks and foreign exchange markets settle payments and are open for general business (including dealings in foreign exchange and foreign currency deposits) in all of the following countries simultaneously: Austria, Belgium, Czech Republic, Denmark, Finland, France, Germany, Greece, Ireland, Italy, Luxembourg, the Netherlands, Norway, Portugal, Spain, Sweden, Switzerland and the United Kingdom.

3.2 Investment Universe:

The “**Investment Universe**” represents the universe of stocks that are eligible for inclusion in the Index. It is reviewed on each Quarterly Selection Date. It comprises all stocks that are, on such Quarterly Selection Date, 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).

3.3 Sector Selection process:

Stocks in the Investment Universe are arranged into 10 “**Sectors**” (by using a standard Industry Classification System). The 10 Sectors are: Basic Materials, Communications, Consumer Cyclical, Consumer Non-Cyclical, Diversified, Energy, Financial, Industrial, Technology and Utilities.

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. 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. 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.

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 252 observations (up to and including the observation immediately prior to the Monthly 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_q” 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 252 observations (up to and including the observation immediately prior to the Monthly Selection Date);

“S” is the skewness of R;

“K” is the excess kurtosis of R.

“Sigma” is the annualised volatility over 252 observations (up to and including the observation immediately prior to the Monthly 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:

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

“Ra” is the time series of the compounded daily total return net over the last 252 business days prior to the Selection Date; “Rb” is the time series of the daily compounded returns of the Investment Universe, over the same period.

3.4 Elimination Process:

On each Quarterly Selection Date, firstly a liquidity filter is applied to the Investment Universe in order to exclude the stocks that do not meet the liquidity threshold, i.e. stocks with an Average Daily Trading Volume less than EUR 15 million. The “Average Daily Trading Volume” is defined as the product of the average number of a stock traded with the average price of the same stock expressed in EUR over the 6 months prior to the Quarterly Selection Date. In the event that the application of the liquidity filter reduces the Investment Universe less than 150 securities, the Index Sponsor will relax the liquidity threshold to ensure that 200 securities are part of the remaining universe.

3.5 Selection Process:

After the Elimination Process, 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; - At least 10% of New Index Constituents belong to each of the Top Sectors; These 30 Stocks become the “New Index Constituents”.

3.6 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.

4. Exceptions to the S&P standard methodology:

The Index Level is, in respect of Business Day (t), calculated by the Index Calculation Agent at the Valuation Time, subject to the occurrence or existence of an Index Disruption Event or an Index Extraordinary Event, according to the S&P standard methodology. Exceptions to the S&P standard methodology are listed below:

4.1 Initial parameters and levels

The initial parameters are as follows:

- IL(t₀) is equal to 2168.66 for the price return version;
- IL(t₀) is equal to 5024.078 for the net total return version;

4.2 Index Formula for the Price Index

The price return index is calculated using the following formula:

$$PriceIndex(t) = NetTotalReturnIndex(t) \times \left(1 - \frac{SD}{365}\right)^{Act(t_0,t)}$$

Where :

SD : means the Synthetic dividend

t₀ : means 3rd January 2002

The level as of the Launch Date 3rd December 2020 and all the levels before the Launch Date have been set to be equal to the levels of the “Finvex Sector Efficient Europe 30 Index” as displayed in the Bloomberg ticker < FSECEUE Index>.

4.3 Rounding

Exchange rates: rounded to 10 decimal places

- Weighting factors: rounded to 10 decimal places
- Index divisors: float numbers
- Index values: rounded to 2 decimal places

Disclaimers

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