BNP PARIBAS INDEX
INDEX METHODOLOGY SUPPLEMENT
BNP Paribas Equity Global Goals World NTR Index

Final version dated 21st October 2019

This document (the **"BNP Paribas Index Methodology Supplement"**) supplements, forms a part of and is subject to the BNP Paribas Index Handbook dated 20 November 2015 (the **"Handbook"**), as may be amended, adjusted, supplemented or replaced from time to time, and as updated from time to time, the First General Supplement dated 1 May 2018 and any subsequent supplement. The current version of the Handbook and all supplements thereto may be downloaded from https://indx.bnpparibas.com/.

The Handbook, as amended by the First General Supplement and this BNP Paribas Index Methodology Supplement together comprise the **"BNP Paribas Index Rules"** for the BNP Paribas Index described herein. In the event of an inconsistency, the following order of precedence will prevail for the purposes of the BNP Paribas Index described herein: (i) this BNP Paribas Index Methodology Supplement, (ii) a supplement to the Handbook that by its terms applies to certain features of the BNP Paribas Index, (iii) any General Supplement, and (iv) the Handbook. Terms used herein, but not defined, bear the meaning set forth in the Handbook, the First General Supplement or any other supplement thereto, or in any applicable Technical Annex.

The BNP Paribas Index Rules will be made available upon request and, if applicable, subject to confidentiality or other agreements between BNP Paribas and the relevant party. Any information provided with respect to a BNP Paribas Index or the BNP Paribas Index Rules is provided on a confidential basis and solely for information purposes. By accepting a copy of the BNP Paribas Index Rules, you agree that you will not disclose, reproduce, redistribute or transmit, in whole or part, the BNP Paribas Index Rules without the written consent of the Index Sponsor.

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Description of the BNP Paribas Equity World Global Goals NTR Index

The objective of the BNP Paribas Equity Global Goals World NTR Index (the "**BNP Paribas Index**") and the strategy and methodology related thereto (the "**BNP Paribas Index Methodology**") is to capture the performance of a Portfolio of companies selected from a pool of shares (the "**Selection Pool**") provided by Vigeo Eiris to the Weighting Determination Agent on a monthly basis, using filtering data provided by Vigeo Eiris and for their compliance with the environmental, social and governance ("**ESG**") criteria established and amended from time to time by the Fédération belge du secteur financier (the "**Febelfin**"), such criteria being the "**Febelfin ESG Criteria**". Some of the shares comprising the Selection Pool will also be "**SDG Champions**", which are shares in companies that meet the Sustainable Development Goals (**"SDG"**) champion criteria set by Vigeo Eiris, as described in Section 4.2 (*Criteria for identifying the SGD Champions*) of Annex 1. On receipt of the Selection Pool from Vigeo Eiris, the Weighting Determination Agent will then apply a filter based on the ESG Score provided by BNP Paribas Asset Management.

The shares in the Selection Pool are then selected for their financial robustness performance using the BNP Paribas GURU® Methodology as set forth in the BNP Paribas GURU® Methodology Technical Annex. The final selection of shares comprising the final portfolio (the "**Portfolio**") is obtained through an optimization methodology (as described in Section 4.5 (*Portfolio Optimization*) of Annex 1) designed to maximise the weightings of shares in companies that are SDG Champions relative to shares in companies which are not SDG Champions. The optimization methodology also serves to (i) limit excessive concentrations of shares in specific sectors or regions, (ii) target a minimum number of shares in the composition of the Portfolio, and (iii) minimise the tracking error with respect to the STOXX Global 1800 NTR USD Index (the "**Benchmark**" and the **"BNP Paribas Index Reference Rate"**).

The BNP Paribas Index is denominated in USD (the **"BNP Paribas Index Currency"**). For all BNP Paribas Index Components that are not denominated in the BNP Paribas Index Currency, the BNP Paribas Index Methodology implements a currency conversion mechanism prior to the calculation

of the BNP Paribas Index Level. The currency conversion mechanism involves the use of specified foreign exchange rates (each, a "**Currency Conversion Rate**").

Calculation of the BNP Paribas Index Level:

On each BNP Paribas Index Level Calculation Date, the Index Calculation Agent calculates the BNP Paribas Index Level in accordance with the provisions of the BNP Paribas Index Rules and as described below.

The BNP Paribas Index Level is determined by multiplying the BNP Paribas Index Level of the immediately preceding Final Rebalancing Date by the aggregate performance of each BNP Paribas Index Component. The BNP Paribas Index Level is calculated in accordance with the provisions of Section 1 (*BNP Paribas Index Level Calculation*) of Annex 1 of this BNP Paribas Index Methodology Supplement and as described below.

The performance of a BNP Paribas Index Component is determined on each BNP Paribas Index Level Calculation Date by calculating its "**Composite Total Return**", which represents the value of a synthetic initial investment of USD 1.00 in such BNP Paribas Index Component. The Composite Total Return is calculated by measuring the performance of the BNP Paribas Index Component between BNP Paribas Index Level Calculation Dates (the "**Total Return Spot**") and converting (if applicable) the Total Return Spot into the BNP Paribas Index Currency using the relevant exchange rate (the "**Currency Conversion Rate**") as described in Section 2 (*Composite Total Return Spot of a BNP Paribas Index Component*) of Annex 1 of this "BNP Paribas Index Methodology Supplement").

The Total Return Spot of a BNP Paribas Index Component is calculated on each BNP Paribas Index Level Calculation Date and represents a synthetic investment in such BNP Paribas Index Component in its original currency based on the closing price as published by the relevant exchange, with all dividends (net of applicable withholding taxes) reinvested in the BNP Paribas Index Component as described in Section 3 (*Total Return Spot of a BNP Paribas Index Component*) of Annex 1 of this BNP Paribas Index Methodology Supplement.

Selection of the BNP Paribas Index Components

The BNP Paribas Index Methodology applies the following steps to select shares from the Selection Pool that will comprise the Portfolio and is a BNP Paribas Index Component (as described below and detailed in Section 4.1 *(Criteria for Identifying the Selection Pool)* of Annex 1).

On or prior to each BNP Paribas Index Component Weighting Determination Date, Vigeo Eiris will provide the Weighting Determination Agent with the shares that meet the Febelfin ESG Criteria set forth in the BNP Paribas Belgian Environmental, Social and Governance Methodology on such date, section (1) of Annex 3 (ESG Annex) of this BNP Paribas Index Methodology Supplement and which are deemed by Vigeo Eiris to be SDG Champions. BNP Paribas Asset Management will provide the BNP Paribas Asset Management Data.

The Weighting Determination Agent will then filter the shares in accordance with the following requirements:

(i)   The share is listed or on an exchange in an Eligible Country (as defined below);
(ii) The share is the primary or most liquid listing of the share issuer;
(iii) The average daily trading volume over the preceding 130 Scheduled Trading Days of the share must be greater than or equal to USD 10,000,000 on the relevant BNP Paribas Index Component Weighting Determination Date; and
(iv) The average daily trading volume over the preceding 20 Scheduled Trading Days of the share must be greater than or equal to USD 10,000,000 on the relevant BNP Paribas Index Component Weighting Determination Date.
(v)   The shares must comply with the provisions of Section (2) of the ESG Annex, and non-compliant shares will be removed.

Thereafter, the BNP Paribas GURU® Methodology (as set forth in *The BNP Paribas GURU® Methodology* annex) is applied. The BNP Paribas GURU® Methodology uses 7 criteria to analyse the fundamentals of each share issuer in the share universe and to calculate the so-called "GURU® Score". Accordingly, each of the 7 criteria belongs to one of three categories: (i) profitability, which is intended to evaluate the profitability of the share issuer, (ii) prospects, which is intended to assess whether a share issuer is capable of maintaining good results, and (iii) valuation, which is intended to assess whether a share issuer has a relatively low valuation. The remaining shares will comprise the **"Selection Pool".**

Finally, each share that remains in the Selection Pool is assigned an Optimal Weight (determined in accordance with Section 4.5 (*Portfolio Optimization)* of Annex 1) using a rule based mathematic portfolio optimisation algorithm based on an Optimiser package (as defined below)*.* The objective of the Optimal Weight is to maximise the aggregate weight of shares of SDG Champion companies. Only shares that satisfy certain optimization constraints, such as Maximum Weight, Sum, Risk, Sectorial Diversification and Geographical Diversification constraints (as further described in Section 4.5. (*Portfolio Optimization)* of Annex 1), are eligible for the Portfolio. If the constraints are too restrictive and a Portfolio is not created, the Risk Constraint may be widened incrementally by 10%. Once the Optimal Weights have been assigned to the shares and the Portfolio is created, shares that have an Optimal Weight of less than 0.2% are removed from the Portfolio. Optimal Weights of remaining shares are then normalised so that (i) the sum of the Optimal Weights is equal to 100% and (ii) no Optimal Weight is greater than 1%.

Rebalancing of the BNP Paribas Index

On each BNP Paribas Index Component Weighting Determination Date, the Weighting Determination Agent (as defined below) will determine the composition and weighting of each BNP Paribas Index Component in accordance with the provisions of Section 4.5 (*Portfolio Optimization*).

On each Rebalancing Date during the Rebalancing Period, the BNP Paribas Index Methodology rebalances 20% by weight of the BNP Paribas Index (in accordance with Section 6 (*Rebalancing of BNP Paribas Index*) of Annex 1) by either (i) adding new BNP Paribas Index Components to the BNP Paribas Index; (ii) removing shares which are no longer BNP Paribas Index Components from the BNP Paribas Index; or (iii) increasing or decreasing the number of units of existing BNP Paribas Index Components which are remaining in the BNP Paribas Index, so that on the final Rebalancing Date in the relevant Rebalancing Period (the "**Final Rebalancing Date**") each BNP Paribas Index Component is weighted in accordance with Section 4.5 (*Portfolio Optimization*). The BNP Paribas Index composition and the BNP Paribas Index Component Weightings remain unchanged in the period from and including the Final Rebalancing Date to but excluding the first Rebalancing Date falling in the Rebalancing Period.

BNP Paribas Index Components

The BNP Paribas Index is comprised of a synthetic portfolio of assets. There is no actual portfolio of assets to which any person is entitled or has any ownership interest. The BNP Paribas Index Methodology does not entail the actual execution of any transactions with respect to the BNP Paribas Index Components. The BNP Paribas Index Methodology synthetically replicates all of the referenced components and transactions.

The BNP Paribas Index Components that comprise the BNP Paribas Index (each, a "**Share**") are shares of common stock of issuers incorporated in an Eligible Country, and which are publicly traded and listed on an exchange therein.

BNP Paribas Index Costs

No costs or fees are deducted from the BNP Paribas Index.

BNP Paribas Index Definitions

BNP Paribas Index:	The BNP Paribas Equity Global Goals World NTR Index (Bloomberg Code: BNPIGGWN Index)
BNP Paribas Index Status:	Public Index
BNP Paribas Index Family:	Thematic Indices
Index Sponsor:	BNP Paribas
Index Calculation Agent:	BNP Paribas Arbitrage SNC
Weighting Determination Agent:	BNP Paribas Arbitrage SNC
BNP Paribas Index Launch Date	10 Oct 2019
BNP Paribas Index Start Date	1 December 2003
BNP Paribas Index Currency:	USD
BNP Paribas Index Composition	
BNP Paribas Index Components:	On the BNP Paribas Index Launch Date, the BNP Paribas Index was comprised of the components described in Table 1 (*BNP Paribas Index Components*) of Annex 2
BNP Paribas Index Reference Rates:	As set forth in Table 2 (*BNP Paribas Index Reference Rates)* of Annex 2.
BNP Paribas Index Component Selection Indicators:	As described in Table 3 of Annex 2 (*BNP Paribas Index Component Selection Indicators*) of Annex 2.
BNP Paribas Index Features	
Return Type:	Total Return
Rebalancing:	Applicable
BNP Paribas Index Component Weighting Determination Dates:	The first Business Day of each calendar month.
Rebalancing Dates:	The period commencing on, and including, the 1st Scheduled Trading Day following the 2nd Business Day following the BNP Paribas Index Component Weighting Determination Date and ending on, and including the 5th Scheduled Trading Day following the 2nd Business Day following the BNP Paribas Index Component Weighting Determination Date (the **"Rebalancing Period"**).
BNP Paribas Index Costs:	Not Applicable

Currency Conversion Mechanism:	Applicable, see Annex 1.
Volatility Control Mechanism:	Not Applicable

Calculation and Publication of the BNP Paribas Index Level:

Initial BNP Paribas Index Level:	Index(0) = 23.1901, as of the BNP Paribas Index Start Date.
Frequency of calculation of BNP Paribas Index Level:	Each weekday
BNP Paribas Index Publication Date:	The Business Day following each BNP Paribas Index Level Calculation Date t
BNP Paribas Index Publication Page:	Bloomberg page: *BNPIGGWN Index* and Reuters page: *.BNPIGGWN*
Website where current composition of the BNP Paribas Index is published:	https://indx.bnpparibas.com/BNPIGGWN Index/

Price Disrupted Days

See Section 4.3 (*Price Disrupted Days)* of the Handbook*.*

BNP Paribas Index Adjustment Events:

Section 5 (*BNP Paribas Index Adjustment Events and Consequences*) of the Handbook, as amended by the First General Supplement shall apply.

BNP Paribas Index Potential Adjustment Events:

See Section 6 (*BNP Paribas Index Potential Adjustment Events and Consequences)* of the Handbook*.*

Technical Annexes applicable to the BNP Paribas Index:

The BNP Paribas Belgian Environmental, Social and Governance Filtering Methodology
The BNP Paribas GURU® Methodology

Each of the above are available at www.indx.bnpparibas.com.

Amended Definitions and provisions applicable to the BNP Paribas Index:

The defined terms in the Master Definitions Annex of the Handbook below shall be replaced as follows:

The definition of **"Exchange"** in the Handbook shall be deleted and replaced with

"Exchange" means, in respect of a BNP Paribas Index Component, the primary exchange or quotation system located in an Eligible Country on which the BNP Paribas Index Component is traded or quoted, any successor to such exchange or quotation system or any substitute exchange or quotation system to which trading in such BNP Paribas Index Component has temporarily relocated, as determined by the Index Calculation Agent.

The definition of "**Scheduled Trading Day**" in the Handbook shall be deleted and replaced with:

"**Scheduled Trading Day**" means a day on which all Exchanges in the Eligible Countries are scheduled to be open for trading during their regular trading sessions.

New definitions and provisions applicable to the BNP Paribas Index:

The following definition shall be added to the Handbook:

"**Eligible Country**" means each of Australia, Austria, Belgium, Canada, Czech Republic, Denmark, Finland, France, Germany, Great Britain, Hong Kong, Iceland, Ireland, Italy, Japan, Luxembourg, Netherlands, New Zealand, Norway, Portugal, Singapore, Spain, Sweden, Switzerland and the United States of America.

"Region" means each of (i) Asia Pacific (being comprised of Australia, Hong Kong, Japan, New Zealand and Singapore), (ii) Europe (being comprised of Austria, Belgium, Czech Republic, Denmark, Finland, France, Germany, Great Britain, Iceland, Ireland, Italy, Luxembourg, Netherlands, Norway, Portugal, Spain, Sweden and Switzerland) and (iii) North America (being comprised of Canada and the United States of America).

Bespoke provisions applicable to the BNP Paribas Index:

The following additional definitions shall apply to this BNP Paribas Index:

"BNP Paribas Asset Management Data" means the available hierarchical ESG Scores in respect of companies in the Selection Pool determined by BNP Paribas Asset Management based on research, analysis and data at company and sectoral levels, using a variety of external data and research sources.

"World Developed Portfolio" means all shares within the Vigeo Eiris World Developed Rating Database which are listed on an exchange in an Eligible Country.

"**Optimiser**" means the Mosek Optimizer™ software package which calculates the weights of the shares in the Portfolio by solving mathematical optimisation problems with constraints.

"Vigeo Eiris Sector" means each of Financial Services – General; Industrial Goods & Services; Electric Components & Equipment; Pharmaceuticals & Biotechnology; Diversified Banks; Business Support Services; Transport & Logistics; Technology-Hardware; Mining & Metals; Chemicals; Insurance; Waste & Water Utilities; Health Care Equipment & Services; Building Materials; Automobiles; Home Construction; Specialised Retail; Financial Services - Real Estate; Beverage; Telecommunications; Supermarkets; Energy; Luxury Goods & Cosmetics; Hotel, Leisure Goods & Services; Electric & Gas Utilities; Publishing; Food; Oil Equipment & Services; Travel & Tourism; Broadcasting & Advertising; Forest Products & Paper; Software & IT Services; Mechanical

Components & Equipment; Aerospace; Heavy Construction; Retail & Specialised Banks and Tobacco.

"Vigeo Eiris Data" means each of:
(i)   the Vigeo Eiris World Developed Rating Database;
(ii)   the Vigeo Eiris ESG Score, being an assessment of the environmental, social and governance performance of a company;
(iii)   the Vigeo Eiris Controversy analysis, being an assessment of the severity of any allegations and litigation affecting a company;
(iv)   the Vigeo Eiris Controversial Activities analysis, being an assessment of the exposure of a company to each of Alcohol, Civilian Firearms/Military, Gambling, Nuclear Power, Pornography or Tobacco;
(v)   the Sustainable Goods and Services Database;
(vi)   the Febelfin ESG Data, as set forth in the BNP Paribas Belgian Environmental, Social and Governance Filtering Methodology;

Further information about the BNP Paribas Asset Management Data and the Vigeo Eiris Data is available on request from the Index Sponsor.

Date offsets:

For any BNP Paribas Index Level Calculation Date t, and for any integer value j, $t + j$ (respectively $t - j$) refers to the BNP Paribas Index Level Calculation Date that is j BNP Paribas Index Level Calculation Dates following (respectively preceding) BNP Paribas Index Level Calculation Date t. For example, $t - 1$ refers to the BNP Paribas Index Level Calculation Date immediately preceding BNP Paribas Index Level Calculation Date t, and $t - 2$ refers to the BNP Paribas Index Level Calculation Date immediately preceding BNP Paribas Index Level Calculation Date $t - 1$.

Annex 1
The BNP Paribas Index Methodology for
the BNP Paribas Equity World Global Goals NTR Index

1.   BNP Paribas Index Level Calculation:

On the BNP Paribas Index Start Date ($t = 0$):

$$Index(t_0) = 100$$

On each BNP Paribas Index Level Calculation Date t subsequent to the BNP Paribas Index Start Date, the BNP Paribas Index Level will be determined by the Index Calculation Agent as follows:

$$Index(t) = Index(t_k) \times \sum_{i \in I} w_i(t_k) \times \frac{C_i(t)}{C_i(t_k)}$$

Where:

I means the set of all BNP Paribas Index Components comprising the BNP Paribas Index on BNP Paribas Index Level Calculation Date t.

$w_i(t_k)$ means the weight of BNP Paribas Index Component i on the Rebalancing Date   in respect of Rebalancing Period k as determined in Section 4.4 (Portfolio Optimization) and in Section 6 (Rebalancing of BNP Paribas Index).

$C_i(t)$ means the Composite Total Return Spot of BNP Paribas Index Component i on BNP Paribas Index Level Calculation Date *t,* determined in accordance with Section 3 *(Calculation of the Composite Total Return Spot of a BNP Paribas Index Component).*

2.   Calculation of the Composite Total Return Spot of a BNP Paribas Index Component:

On the BNP Paribas Index Start Date ($t = 0$), $C_i(t_0) = 1$

On each BNP Paribas Index Level Calculation Date *t* following the BNP Paribas Index Start Date, the Composite Total Return Spot of a BNP Paribas Index Component i ($C_i(t)$) is determined in accordance with the following formula:

$$C_i(t) = C_i(t-1) \times \frac{T_i(t) \times FX_i(t)}{T_i(t-1) \times FX_i(t-1)}$$

Where:

$T_i(t)$ means the Total Return Spot of BNP Paribas Index Component i on BNP Paribas Index Level Calculation Date t, as determined in accordance with Section *3(Calculation of the Total Return Spot of a BNP Paribas Index Component*).

$FX_i(t)$ means BNP Paribas Index Reference Rate 1 for the conversion from the relevant BNP Paribas Index Component Currency to the BNP Paribas Index Currency for BNP Paribas Index Component i on BNP Paribas Index Level Calculation Date t.

If any BNP Paribas Index Component i did not exist on the BNP Paribas Index Start Date, the Composite Total Return Spot of such BNP Paribas Index Component i for the first date on which it is added to the BNP Paribas Index shall be set at 1.

3.   Total Return Spot of BNP Paribas Index Component

On the BNP Paribas Index Start Date ($t = 0$):

$$T_i(t_0) = S_i(t_0)$$

On each BNP Paribas Index Level Calculation Date *t* following the BNP Paribas Index Start Date, the Total Return Spot of a BNP Paribas Index Component *i* (T_i) is determined in accordance with the following formula:

$$T_i(t) = T_i(t-1) \times \frac{S_i(t) + \sum_{j \in J_i} 1_{t=t_{i,j}} \alpha_i d_{i,j}}{S_i(t-1)}$$

Where: $S_i(t)$ is the Settlement Price of the ith BNP Paribas Index Component as published relevant Exchange on BNP Paribas Index Level Calculation Date t, or if such day Scheduled Trading Day for BNP Paribas Index Component i, the Settlement Price immediately preceding Scheduled Trading Day.

$j \in J_i$ means the jth dividend of the set of all dividends distributed with respect to BNP Index Component i.

α_i means the reinvestment percentage for dividends of BNP Paribas Index Compo which shall be the gross dividend for BNP Paribas Index Component i, net withholding tax imposed by the country of domicile of the share issuer of suc Paribas Index Component i, withholding tax rates are quoted on the following v https://indx.bnpparibas.com/indexresources.

$d_{i,j}$ means the gross value of dividend j for BNP Paribas Index Component i.

$1_{t=t_{i,j}}$ means the indicator function and is equal to 1 if $t = t_{i,j}$; otherwise is equal to 0.

If any BNP Paribas Index Component i was not comprised in the BNP Paribas Index on the BNP Paribas Index Start Date, the Total Return Spot of such BNP Paribas Index Component i for the first date on which it is added to the BNP Paribas Index shall be set to the Settlement Price of such BNP Paribas Index Component on such Scheduled Trading Day.

4.   Selection of the BNP Paribas Index Components

The Weighting Determination Agent will be responsible for determining the composition of the BNP Paribas Index being reweighted on a monthly basis in accordance with the following provisions:

4.1   Criteria for identifying the Selection Pool:

On each BNP Paribas Index Component Weighting Determination Date, Vigeo Eiris will provide the Weighting Determination Agent with the shares comprising the Selection Pool that meet the ESG Criteria set forth in the Belgian ESG Annex on such date.

The Weighting Determination Agent will filter the shares provided by Vigeo Eiris in accordance with the following criteria to determine the shares that will remain in the Selection Pool:
   (i)   The share is listed on an exchange in any Eligible Country.
   (ii)   The share is the primary or most liquid listing of the share issuer.
   (iii) The average daily trading volume over the preceding 130 Scheduled Trading Days of the share must be greater than or equal to USD 10,000,000 on the relevant BNP Paribas Index Component Weighting Determination Date.
   (iv) The average daily trading volume over the preceding 20 Scheduled Trading Days of the share must be greater than or equal to USD 10,000,000 on the relevant BNP Paribas Index Component Weighting Determination Date.
   (v)   The share complies with the ESG criteria set out in Section (1) of the ESG Annex.

4.2   Criteria for identifying the SDG Champions

In respect of all the shares comprised in the Selection Pool, Vigeo Eiris will identify the companies that it deems to be champions by Region (as defined above (*Bespoke Provisions applicable to the BNP Paribas Index*)) and by Vigeo Eiris Sector (as defined above (*Bespoke Provisions applicable to the BNP Paribas Index*)), in accordance with following criteria:

(i)   The Vigeo Eiris ESG Score of the company issuing the share is, as determined by Vigeo Eiris, greater than or equal to 50/100.

(ii)   The share issuer must, in the determination of Vigeo Eiris, have no major involvement in fossil fuel, or if it has major involvement in fossil fuel the share issuer must have a Vigeo Eiris Energy Transition Score greater or equal to 50/100.

(iii)   The company issuing the shares, in the determination of Vigeo Eiris, meets one of the following three requirements:

(A)   It has the highest Vigeo Eiris Product Score by Vigeo Eiris Sector and Region; or

(B)   It has (1) the highest Vigeo Eiris Behaviour Score by Vigeo Eiris Sector and Region and (2) a Vigeo Eiris Behaviour Score of at least 50/100; or,

(C)   It has (1) a Vigeo Eiris Behaviour Score greater than 50/100 by Vigeo Eiris Sector and Region and (2) the highest Vigeo Eiris Progression Score by Vigeo Eiris Sector and Region, provided that the Vigeo Eiris Progression Score is at least 5/100.

Where:

Vigeo Eiris Energy Transition Score is a minimum score of 0 and a maximum score of 100 that is determined by Vigeo Eiris according to the strategy that is employed by the relevant company for the purpose of identifying long-term structural changes in energy systems relating to sectors and risks (the "**Energy Transition Strategy**") and is specific to Vigeo Eiris Sector(s).

Vigeo Eiris Product Score is a score calculated by Vigeo Eiris in relation to the product or service that the relevant company provides and its SDG credentials;

Vigeo Eiris Behaviour Score is a score calculated by Vigeo Eiris in relation to the relevant company and the way in which it conducts itself with respect to corporate governance, ethical processes, corporate sustainability and responsibility, among SDG behavioural principles;

Vigeo Eiris Progression Score is a score calculated by Vigeo Eiris and is based upon the improvement in the relevant company's Vigeo Eiris Behaviour Score against its Vigeo Eiris Behaviour Score two years previously.

Each share that satisfies the above criteria is a "**SDG Champion**".

Each Vigeo Eiris ESG Score, Vigeo Eiris Energy Transition Score, Vigeo Eiris Product Score and Vigeo Eiris Behaviour Score is available upon request.

4.3   Application of the BNP Paribas Asset Management Data

On receipt of the Selection Pool from Vigeo Eiris, the Weighting Determination Agent will apply the filter set forth in Section 2 of Annex 3 (*The ESG Annex*).

4.4   Application of the Guru® Methodology

Thereafter, the Weighting Determination Agent applies the GURU® Methodology (in accordance with *The BNP Paribas GURU® Methodology* Technical Annex, which is available at https://indx.bnpparibas.com/resources).

The Selection Pool is further reduced by removing shares that have been subject to any of the following events (each, a "**Corporate Action**"), based on information provided by Bloomberg:

a) An acquisition for which
  a. the share is being acquired by another company;
  b. the announcement date is less than two calendar years prior to the BNP Paribas Index Component Weighting Determination Date;
  c. and the combined percentage of the shares already hold by the acquirer and the shares sought to acquire is greater than 99%;

b) A bankruptcy for which the announcement date is less than two calendar years prior to the BNP Paribas Index Component Weighting Determination Date;

c) A delisting (excluding a Reorganisation event) for which the announcement date is less than two calendar years prior to the BNP Paribas Index Component Weighting Determination Date;

d) A spin-off for which
  a. the announcement date is less than two calendar years prior to the BNP Paribas Index Component Weighting Determination Date;
  b. and the BNP Paribas Index Component Weighting Determination Date is between the announcement date and the effective date plus 60 week days;

For each Thomson Reuter Economic Sector in each geographical zone, shares in the Selection Pool are then ranked from highest to lowest GURU® score. The top 50% shares in each Thomson Reuter Economic Sector in each geographical zone are kept in the Selection Pool.

4.5 Portfolio Optimization

Following the application of the GURU Methodology to the Selection Pool, the Weighting Determination Agent, using an Optimiser (as defined above (*Bespoke Provisions applicable to the BNP Paribas Index*)), calculates the weight of each share using a mathematical optimization algorithm that analyses all possible sets of weights that can be assigned to each share (each, an "**Optimal Weight**" or "**W$_{optimal}$**") in order to identify a combination of optimal weights

The Optimal Weight calculation seeks to maximise the aggregate weight of SDG Champion companies within the Portfolio while adhering to the following optimisation constraints:

(i) **Maximum Weight Constraint**: no share may have an Optimal Weight of more than 1%;

(ii) **Sum Constraint**: the sum of the Optimal Weights must be equal to 100%;

(iii) **Risk Constraint**: the expected tracking error of the BNP Paribas Index to the BNP Paribas Index Reference Rate must not exceed $3\% \cdot Multiplier$, where the tracking error is calculated in accordance with the following formula:

$$\mathrm{W}_{optimal}^{t} \cdot CovMatrix \cdot \mathrm{W}_{optimal} \times Multiplier$$

(iv) **Sectorial Diversification Constraint**: the weight of each Thomson Reuters Business Classification Economic Sector in the resulting Portfolio may not deviate by more than 30% of the weight of the Thomson Reuters Business Classification (**"TRBC"**) Economic Sector within the World Developed Portfolio; and

(v) **Geographical Diversification Constraint**: the weight of each geographical zone in the resulting Portfolio may not deviate by more than 30% from the weight of the geographical zone within the World Developed Portfolio.

Where:

W$_{optimal}$^{t} is the Optimal Weight on BNP Paribas Index Level Calculation Date t;

CovMatrix is determined in accordance with Section 5 (*Covariance Matrix Calculation*);

Multiplier is equal to 100,000,000; and

If for any TRBC Economic Sector, the number of eligible companies times 1% is below 50% of the Benchmark Portfolio's weight in the TRBC Economic Sector then the maximum weight constraint is set to 2% for the eligible companies in the TRBC Economic Sector.

If, having performed the above Portfolio Optimisation, there are no Optimal Weights that solve the mathematical optimization problems, the Risk Constraint will be widened in increments of 10% (i.e. to identify a tracking error of 3.3% for the second iteration) until a solution to the mathematical optimization problem is found and Optimal Weights are identified and assigned to shares.

Once the Optimal Weights have been assigned to the shares, any shares that have an Optimal Weight of less than 0.2% (the "**Minimum Weight Constraint**") are removed from the Selection Pool and the portfolio optimization is re-run on remaining shares in accordance with the above four optimization constraints.

If there are no Optimal Weights that solve the mathematical optimisation problem the Minimum Weight Constraint will be reduced in increments of 0.02% (i.e. to a Minimum Weight Constraint of 0.18% for the second iteration), to a minimum of 0%, so that the Portfolio will therefore be comprised of a minimum of 100 shares and a maximum of 500 shares.

5. Covariance Matrix Calculation

The Covariance Matrix in respect of each matrix (i, j) ("**CovMatrix(t, i, j)**") entry is calculated over a period of 252 Scheduled Trading Days and is determined in accordance with the following formula:

$$\text{CovMatrix}(t,i,j) = \frac{1}{252} \times \sum_{l=t-251}^{t} \left[\left(\alpha\text{Return}_i(l) - \frac{1}{252} \times \sum_{m=t-251}^{t} \alpha\text{Return}_i(m) \right) \times \left(\alpha\text{Return}_j(l) - \frac{1}{252} \times \sum_{m=t-251}^{t} \alpha\text{Return}_j(m) \right) \right]$$

Where:

i means BNP Paribas Index Component i;

j is a variable and is BNP Paribas Index Component j;

l means Scheduled Trading Day l in the set of the last 252 Scheduled Trading Days preceding BNP Paribas Index Level Calculation Date t;

m is a variable and is Scheduled Trading Day m in the set of the last 252 Scheduled Trading Days preceding BNP Paribas Index Level Calculation Date t;

αReturn means the excess return of the BNP Paribas Index relative to the return of the Benchmark, and αReturn $_i$ (t) is the αReturn of BNP Paribas Index Component i on BNP Paribas Index Level Calculation Date t, calculated in accordance with the following formula:

$$\alpha Return_i(t) = \frac{S_i(t) \times FX_i(t)}{S_i(t-1) \times FX_i(t-1)} - \frac{BenchmarkLevel(t)}{BenchmarkLevel(t-1)}$$

S$_i$(t) is the Settlement Price of BNP Paribas Index Component i;

FX$_i$(t) is the Currency Conversion Rate; and,

Benchmark Level(t) means in respect of BNP Paribas Index Level Calculation Date t, the Settlement Price of the BNP Paribas Index Reference Rate.

6. Rebalancing of BNP Paribas Index

On each BNP Paribas Index Component Rebalancing Date during the BNP Paribas Index Rebalancing Period, the Index Calculation Agent will adjust 1/5 of the BNP Paribas Index Components by (i) adding new BNP Paribas Index Components; (ii) removing shares which are no longer BNP Paribas Index Components; or (iii) increasing or decreasing the number of units of existing BNP Paribas Index Components which are remaining in the BNP Paribas Index, so that each BNP Paribas Index Component in the BNP Paribas Index reaches its relevant optimal weight at the end of the BNP Paribas Index Rebalancing Period.

Annex 2

Table 1 – BNP Paribas Index Components

As of the BNP Paribas Index Start Date, the BNP Paribas Index was comprised of the following BNP Paribas Index Components:

BNP Paribas Index Component	BNP Paribas Index Component Type	Weighting	Minimum Component Weighting	Maximum Component Weighting	Price Source
Shares selected in accordance with the BNP Paribas Index Methodology on each BNP Paribas Index Weighting Determination Date, for inclusion on the next following Rebalancing Date.	Shares	As determined in section 4.4 (*Portfolio Optimization*) of Annex 1.	0%	2%	The Exchange

Table 2 – BNP Paribas Index Reference Rates

BNP Paribas Index Reference Rate	Designated Maturity/Settlement Price	Reference Price Source	BNP Paribas Index Reference Rate Pricing Page
STOXX Global 1800 NTR USD	The daily official closing level, as published by the Reference Price Source.	STOXX Limited	Bloomberg SXW1V Index, or any successor page thereto

Table 3 – BNP Paribas Index Component Selection Indicators

	BNP Paribas Index Component Selection Indicator	BNP Paribas Index Component Selection Indicator Pricing Page	BNP Paribas Index Component Selection Indicator Price Source
1.	Optimiser	https://www.mosek.com/	Mosek Optimizer™ software package

Annex 3 – ESG Annex

On each BNP Paribas Index Component Weighting Determination Date, the following steps will be applied in determining the share issuers eligible for inclusion in the Selection Pool in accordance with the provisions set forth in Annex 1:

(1)   Based on the Vigeo Eiris Data, Vigeo Eiris will determine the eligible share issuers using the following criteria:

      (i)   The Vigeo Eiris ESG Score of the share issuer is in the top 2/3 of all entities in the relevant Vigeo Sector and is greater of equal to 30.

      (ii)   The company is not listed on the Vigeo Eiris Controversy Warning List, and the Vigeo Eiris Controversy analysis score provided by Vigeo Eiris is not "Critical".

      (iii)   Any implication in production or extraction of Tar sands and oil shale must be lower than 10% of the company's turnover, as assessed by Vigeo Eiris.

      (iv)   Any implication in production or extraction of Coal must be lower than 10% of the company's turnover, as assessed by Vigeo Eiris.

No company should be classified as having major involvement in any of the Vigeo Eiris Controversial Activities, as previously defined.

(2)   Where BNP Paribas Asset Management provides an ESG Score in respect of any share being considered for inclusion in the Selection Pool, such share must have an ESG Score of less than, but not equal to, 9. Shares in companies with an ESG score of 9 or 10 will be discarded from the Selection Pool by the Weighting Determination Agent.