



# Index Methodology Guidebook

## BITA CIRCA5000 Green Energy & Technology Impact Index

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Version #1.0

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# Log of Amendments

**31.01.2024** – v.1.0. First publication of methodology guide.

# Introduction and Background

## ABOUT THE INDEX

The **BITA CIRCA5000 Green Energy & Technology Impact Index** is a rules-based index that tracks the market performance of companies, listed on recognized exchanges, that aim to eliminate the 51B tonnes CO<sub>2</sub>e emitted each year. The index constituents are weighted using a modified free float market capitalization, adjusted by impact ratings, and rebalanced semi-annually. Index values are disseminated on an intraday and end-of-day basis.

## ABOUT BITA

BITA is a Germany-based Fintech that provides enterprise-grade indexes, data and infrastructure to institutions operating in the passive and quantitative investment spaces. Thanks to its innovative index management infrastructure, designed to outperform other existing solutions in terms of flexibility and speed, BITA can provide independent, methodologically sound indexes that are both investable and replicable by customers and stakeholders. BITA's methodologies and processes are completely transparent and available publicly.

## ABOUT CIRCA5000

CIRCA5000 is Europe's leading dedicated impact ETF issuer. As a proud B Corp, CIRCA5000 believes that investors should be able to invest in companies having a positive impact without having to sacrifice any potential financial return. From energy and water to food, health, and education, all our investments have the same goal: to keep the future human.

## ABOUT VESTED IMPACT

Vested Impact is a UK-based company that provides automated and scalable impact assessment that leverages over 200 million science-based and impact data points from the World's leading institutions to provide quantifiable, comparable and detailed impact. Vested Impact's Impact Algorithm can help investors, asset managers and companies to understand impact and impact opportunities and integrate these factors into their decision making, portfolio construction, compliance and reporting, and business management process.

## ABOUT THIS DOCUMENT

This document is published to serve as a guidebook of the methodologies adopted in the construction, calculation, and management of the index. Any methodological changes or alterations to this document are performed by the BITA Index Management Board (BIMB) and authorized by the BITA Oversight Function, following the directives of both the "BITA Index Methodology Policy" and the Regulation (EU) 2016/2011 "Benchmark Regulation" (BMR). The index is owned and administered by BITA GmbH.



# Index Characteristics and Specifications

## 1. GENERAL INFORMATION AND INDEX OBJECTIVES

### 1.1. General Information

The **BITA CIRCA5000 Green Energy & Technology Impact Index** (hereafter, “The Index”) is a rules-based index that tracks the market performance of companies, listed on recognized exchanges, that aim to eliminate the 51B tonnes CO<sub>2</sub>e emitted each year. The index constituents are weighted using a modified free float market capitalization, adjusted by impact ratings, and rebalanced semi-annually. Index values are disseminated on an intraday and end-of-day basis.

- **Inception Date:** 10.04.2024
- **Index value at inception:** 1,000
- **Return Calculation:** Net Total Return
- **Weighting Mechanism:** Modified Free Float Market Capitalization adjusted for Vested Impact Score
- **Rebalancing Frequency:** Semi-annually
- **Reconstitution:** Semi-annually
- **Number of Constituents:** Variable up to 75

The base currency of the index is USD. Index values may also be published in other currencies when applicable.

### 1.2. Index Overview and Sustainability Objectives

The negative impacts of climate change could be severe from both an environmental and social perspective. The overdependence on fossil fuels has led directly to a global crisis of unprecedented scale.

By concentrating on strategies that not only alleviate but proactively aim to diminish greenhouse gas emissions, it can be guaranteed that the global economy's endeavors to attain the 1.5°C warming target set forth in the Paris Agreement will be successful.

The index includes the companies enabling and driving the transition towards a carbon neutral future.

### 1.3. Investment Themes

The companies in the index will look to tackle the climate issue head on in 5 main areas, all of which look to innovate and secure the planet for future generations.

1. **Clean Energy:** Global energy-related CO<sub>2</sub> emissions grew to a staggering 36.3GT in 2021, marking an unprecedented record high. For the planet to attain its 2050 net zero objectives, the clean energy arises as a potential solution.



Companies in this theme are innovating in areas of clean energy generation, clean energy equipment and technology, and alternative clean fuels.

- 2. Energy Efficient Technologies:** The reduction of waste and the implementation of energy-efficient practices in the performance of existing tasks are crucial aspects of climate innovation. Such measures not only contribute to the decrease of greenhouse gas emissions, but also result in lower economic costs.

Companies in this theme are innovating in areas of energy storage, energy efficiency and power management systems, and smart grid technologies.

- 3. Green Buildings:** The utilization of eco-friendly architectural structures not only represents one of the most efficient strategies to confront climate change, but it has also been substantiated through research that such constructions contribute to the formation of sustainable communities and can potentially stimulate economic expansion.

Companies in this theme are innovating in areas of green construction, building maintenance, clean tech products and services, green building materials, and building energy efficiency technologies.

- 4. Electric Vehicles and Green Transport:** Electric vehicles and eco-friendly transportation alternatives not only contribute to a cleaner environment, but they also generally exhibit lower operational expenses, minimize noise pollution, and strive to enhance overall passenger and driver satisfaction.

Companies in this theme are innovating in areas of electric vehicles, component parts, clean transport technology, transport infrastructure and EV charging networks and the shift of ownership and usage model enablers.

- 5. Greenhouse Gas Reduction:** The reduction of greenhouse gasses sits at the very core of climate innovation. Reducing emissions not only improves air quality but saves lives and crucially, slows the pace of climate change.

Companies in this theme are innovating in areas of carbon capture and storage and pollution prevention and reduction technologies.

## **1.4 BITA Impact Universe Research**

Leveraging its expertise in the research, collection, and normalization of product, service, and activity footprint data, BITA has developed a comprehensive set of impact exposure datasets that provide unparalleled granularity and insight into the materiality of a company's positive and negative externalities on people, planet, and society over the long, medium, and short term. These datasets serve a base for the construction and maintenance of BITA's Positive Impact Universes.

Positive impact investing represents a strategic approach that seeks to produce favorable social or environmental outcomes in tandem with financial returns. The Positive Impact Universes are constructed by identifying economic activities that are deemed to generate social or environmental benefits, such as green energy solutions, forest preservation solutions, well-being solutions, access to education solutions, and more, while avoiding harmful economic and business activities.



From a coverage perspective, the Positive Impact Universes address a variety of impact-related themes and sub-themes:

- Climate Impact
  - Carbon Capture Solutions
  - Green Energy and Energy Efficiency Solutions
  - Smart and Green Infrastructure Solutions
  - Green Transport Solutions
- Sustainability of Resources Impact
  - Circular Economy and Recycling Solutions
  - Forest and Soil Preservation Solutions
  - Sustainable Agriculture Solutions
  - Sustainable Food Production Solutions
  - Water Sustainability Solutions
- Quality of Life Impact
  - Healthy Nutrition Solutions
  - Longevity Tech Products and Technologies Solutions
  - Sanitation Solutions
  - Sustainable Pharma Solutions
  - Well-being Products and Technologies Solutions
- Equality and Inclusion Impact
  - Access to Education Solutions
  - Affordable Health Solutions
  - Affordable Housing Solutions
  - Financial Inclusion Solutions
  - Poverty Reduction Solutions
  - Social Equality and Diversity Solutions

The securities issued by companies categorized under the various themes and sub-themes disclosed above serve as the based for the construction of the initial universes from which the BITA Circa5000 family of indices are developed. This process of selecting constituents from the initial universe is carried out in accordance with the established methodology governing the BITA Circa5000 family of indices.

### **1.5 BITA CIRCA5000 StayAway Framework**

In order to assess the involvement of companies in controversial industries, activities, and behaviors, BITA and CIRCA5000 have collaborated to jointly develop and maintain the **StayAway Framework**. This research-based analytical framework aims to identify and assess the extent to which a company causes, contributes, or is linked to violations of widely recognized international norms and standards. The StayAway screens provide a normative assessment based on the UN's Global Compact Principles, International Labour Organization's (ILO) Conventions, OECD Guidelines for Multinational Enterprises, the UN Guiding Principles on Business and Human Rights (UNGPs) and international regulatory and sustainability standards.

The framework addresses three main areas of screening:

I. **Controversial Business Involvement Screen:** The first screen assesses and quantifies an organization's exposure to contentious or unsustainable industries based on the revenue generated by products, services, and activities associated with the following sectors:

- Thermal Coal
- Fossil Fuels
- Alcohol
- Gambling
- Adult Entertainment
- Tobacco
- Recreational Drugs
- Controversial Weapons
- Defence
- Firearms
- Nuclear
- Palm Oil
- Single-use Plastics
- Damaging Pesticides
- Fur and Leathers
- Meat Products
- Commercial Fishing
- Timber
- Soybeans

II. **Controversial Conduct Screen:** The second screen assesses organizations based on their involvement in controversial practices and behaviors during a five-year timeframe and across a wide set of topics including:

- Predatory Lending
- Bribery
- Corruption
- Material Environmental Damage
- Human Rights Violation
- Child Labour
- Discriminatory Practices
- Animal Mistreatment
- Unethical Pricing
- Fraud
- IP Infringement
- Patent Trolleying
- Multilevel Marketing

III. **Sanctioned Companies Screen:** The third screen stage assesses and filters securities from companies enlisted in the Sanctions List issued by the U.S. Office of Foreign Assets Control (OFAC) and the Sanctions Tracker of the European Union. Companies featured in any of these lists are ineligible for inclusion within the index. The official websites to access the OFAC Sanctions List are <https://sanctionssearch.ofac.treas.gov/> and the European Union



Sanctions Tracker can be accessed through <https://data.europa.eu/apps/eusanctionstracker/entities/>.

The StayAway framework and associated StayAway Exclusion List are maintained independently of the index to allow them to evolve with industry and regulatory best-practice. For further details concerning BITA and CIRCA5000's collaboration, and the StayAway framework please visit: [www.circa5000.com](http://www.circa5000.com).

## **1.6 Vested Impact Scores**

Impact-related scores are sourced from Vested Impact Ltd. and are based on input data extracted from company disclosures and verified external sources. Vested Impact does not take self-reported impact data from companies, and does not actively engage with the scored entities. The scores summarize a company's positive impact contribution and negative impact contribution and use a universal standard and methodology across sectors, industries and asset classes (adopting primarily the impact assessment framework of the Impact Management Project, or IMP, Norms and aligned with the UN SDGs).

Vested Impact's Impact Algorithm helps investors, asset managers and companies to understand impact risks and impact opportunities and integrate these factors into their portfolio construction and management process. Vested Impact's methodology is different to existing ESG-focused metrics as it goes beyond standard inward looking ESG metrics; which assess the internal operations and self-disclosed decelerations of a company. The algorithm is based on a methodology built by experienced impact analysts, leveraging and combining the best impact measurement methodologies in the world to be able to attribute and quantify impact, focusing on the intersection between a company's core business activities and markets, and the social issues that can create significant risks and opportunities for the company.

Vested Impact strongly incorporates the pillars and approach of the Impact Management Project, whilst also adopting the terminology, definitions of the OECD Due Diligence Guidance for Responsible Business Conduct which directly aligns with regulatory requirements for companies and assets such as the EU CSRD.

The algorithm assesses the impact of assets at an activity level; leverage language models to determine an assets underlying business products, services, and activities. The algorithm then leverages over 200,000,000 academic articles to provide science-based evidence for the causal link of individual business activities against the issues they impact (relevant to different geographies) and pulls on over 100,000,000 data points from over 250 impact organizations to validate the impact across each activity, country and SDG Target combination (which are referred to as "impact slices"); assessing the impact against 4 core pillars that are consistent across all companies, to produce an absolute impact rating for a company; as well as underlying impact metrics on each "impact slice" allowing for deep and nuanced impact strategies.

Further information on the scores can be found in the following link: <https://www.vestedimpact.co.uk/>



## 2. SHORT NAME AND IDENTIFIERS

The index is distributed under the following identifiers:

Name	Type	FIGI	Ticker
BITA CIRCA5000 Green Energy & Technology Impact Index	Net Total Return		BCGETII

## 3. EU BENCHMARKS REGULATION CONSIDERATIONS AND STATEMENT

BITA GmbH is the benchmark “administrator” of the BITA CIRCA5000 Green Energy & Technology Impact Index, the “Benchmark” or “Index”<sup>1</sup>.

The Index is calculated based on readily available data and does not use any contributed input data (as defined in Article 3(1)(8) of the BMR). The Index is classified as a non-significant benchmark (as defined in Article 3(1)(27) of the BMR).

The Index promotes a range of environmental, social and governance characteristics through the consideration of sustainability driven (ESG) factors. The Index is not classified as EU Climate Transition Benchmark (as defined in Article 3(1) (23a) of the BMR) or EU Paris-aligned Benchmark (as defined in article 3(1) (23b) of the BMR).

For the complete Benchmark Statement on the Index, please refer to the “[BITA Governance Policies](#)”.

This Methodology guide should be read in conjunction with the Index’s Benchmark Statement and other associated BITA Governance policies and methodology documents. These documents are highlighted whenever referenced in this Methodology guide. They are also available on BITA’s website (<https://www.bit.io/governance.html>).

## 4. INPUT DATA

In line with the input data requirements under the Article 11 of the Regulation (EU) No 596/2014 (the “Benchmarks Regulation” or “BMR”), the Index does not use contributions of input data, which may be prone to contributor discretion. A contribution of input data is defined as such data not readily available to an administrator or to another person for the purposes of passing to an administrator that is required in connection with the determination of a benchmark and is provided for that purpose. See Article 3(1)(8) of the EU Regulation 2016/1011 of the European Parliament and of the Council of 8 June 2016.

At each calculation point, the index value is calculated based on the constituents’ individual quotes on the respective regulated exchanges. The constituents’ most recent prices are used. When the constituents are quoted in a different currency, quotes are translated using the most recent spot FX rates. The daily index closing value is calculated using the spot FX rates as of the 16.00 hrs London (UTC + 01:00) WM fixing quoted by Reuters. If no 16:00 London WM Fixing is available, an alternative 16:00 London spot rate will be used.

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<sup>1</sup>The term administrator is used in this document in the same sense as it is defined in Regulation (EU) 2016/1011 of the European Parliament and of the Council of 8 June 2016 on indices used as benchmarks in financial instruments and financial contracts or to measure the performance of investment funds (the “Benchmarks Regulation” or “BMR”).



Positive and Negative Impact exposure data is internally researched and generated by BITA, following a systematic, transparent process that collects revenue and financial data from publicly available company disclosures and regulatory filings such as 10-Ks, 10-Qs, 20-Fs, 8-Ks, quarterly earnings reports, company presentations and/or official earnings conference call transcripts.

The impact rating data provider has been selected based on an assessment of its existing processes and methodologies to ensure the reliability and representativeness of the data. The data provider utilizes a fully systematic approach and has processes in accordance with accepted market standards.

For more detailed information on specific guidelines regarding the types of Input data, the procedures for the control of input data and the exercise of expert judgement please refer to the "[BITA Input Data Policy](#)".

## 5. INDEX CALCULATION AND DISSEMINATION FREQUENCY

### **5.1. Calculation Methodology**

The index is based on the Laspeyres formula, which links each successive weighted basket of securities in the index with the preceding basket. This translates into a unique index "Divisor" for each index, which is adjusted to maintain the continuity of the index's values across changes due to corporate actions.

### **5.2. Calculation Frequency**

The official index closing level is calculated once a day, every Business Day (EoD calculation). In addition to the official close calculation, index levels are calculated intraday with a 1-second resolution during the index dissemination period. Historical "EoD" index data is available as backtested data starting on the index backtesting date, and as calculated and maintained data starting on the index inception date.

### **5.3. Index Dissemination**

The Intraday Calculation and Dissemination of the Index occurs every Business Day between 9:00hrs and 22:00hrs CET. Official index EOD levels are calculated and disseminated after the close of all exchanges on which the index constituents are listed (EoD calculation). A day is considered to be a Business Day if at least one of the exchanges considered in the Index is open for trading. The index is distributed via BITA's direct dissemination channels and a variety of data vendors when applicable.



# Index Methodology

## 1. UNIVERSE CONSTRUCTION

### 1.1 Initial Universe

The BITA Global Impact Universe is composed of global, publicly listed securities, issued by companies with products and services deemed to generate a positive environmental and social impact. The companies included in the Initial Universe are contributing to solutions in the following areas:

- A. Clean Energy:** The generation of clean energy, production of alternative clean fuels, as well as products, equipment and technology that support the generation of clean energy.
- B. Energy Efficiency Technologies:** The technology for storage of energy, supporting systems for energy efficiency and power management and smart grid technologies.
- C. Green Buildings:** The construction and maintenance of green buildings, clean tech products & services, materials related to green building construction and energy efficiency technologies that support green buildings.
- D. EVs & Green Transport:** The development and production of electric vehicles as well as component parts, related clean transport technology, supporting infrastructure regarding transportation such as EV charging networks, shift of ownership and usage model enablers.
- E. GHG Reduction:** Carbon capture and storage facilities, technologies related to pollution prevention and reduction technologies.
- F. Other:** Any other activity that can reasonably be deemed to contribute to the objective of reducing the strain placed on the environment by human-induced Climate Change and CO2 emissions.

Each company's thematic alignment is determined using publicly available revenue data provided by the company through regulatory filings such as Annual Reports, 10-Ks, 10-Qs, 20-Fs, 8-Ks and other similar regulatory filings, quarterly earnings reports, company presentations and/or official earnings conference call transcripts, as well as news.

### 1.2. Eligible Universe

The Final Eligible Universe is constructed after the application of the following screens and filters:

- A. Minimum size requirement:** Securities of companies with market capitalization below USD 500 million are excluded.
- B. Minimum free-float requirement:** Securities with a free-float of less than 20% are excluded.



- C. Minimum liquidity requirement:** Securities with a 3-month ADTV below USD 500,000 are excluded. In the unlikely event where, due to extreme market events, the minimum liquidity requirement results in a number of eligible securities below what is required to ensure the viability of the index, the ADTV threshold will be extraordinarily reduced to USD 250,000 in the respective reconstitution event.
- D. Security types:** Ordinary shares and ADRs listed on NYSE and Nasdaq are admitted.
- E. Eligible exchanges:** Only securities listed at any of the eligible exchanges included on annex A are admitted.
- F. Thematic Revenue:** Only securities with at least 10% thematic revenue alignment to one of the sub-themes are eligible for inclusion in the index.
- G. Vested Impact Scores:** Each company is identified by their positive contribution to advancing progress on the UN Sustainable Development Goal Targets. Only securities that comply with the following thresholds, based on the relevant thematic UN SDG Targets and aggregated Vested Impact Scores, are admitted into the eligible universe.
- a. Net Impact Score > 0
  - b. Negative impact score < 30
  - c. Positive impact score ≥ 30
- H. BITA CIRCA5000 StayAway Framework Screen:** Securities included on the BITA CIRCA5000 StayAway Exclusion List due to their involvement in either controversial business activities or controversial conduct are excluded. More information on the BITA CIRCA5000 StayAway Framework can be found at [www.circa5000.com](http://www.circa5000.com).
- I. Sanctioned companies filter:** Securities from companies enlisted in the Sanctions List issued by the U.S. Office of Foreign Assets Control (OFAC) and the Sanctions Tracker of the European Union, are ineligible for inclusion within the index. The official websites to access the OFAC Sanctions List are <https://sanctionssearch.ofac.treas.gov/> and the European Union Sanctions Tracker can be accessed through <https://data.europa.eu/apps/eusanctionstracker/entities/>.

After all the filters, screens and adjustments are applied, the resulting basket of securities will be considered the Eligible Universe of the Equity Portfolio.

## 2. INDEX CONSTITUENT SELECTION

### 2.1. Index Ranking

Securities are ranked by Vested Impact Score, and the top 75 are selected as constituents. If there are fewer than 75 eligible securities, all securities that enter the eligible universe are selected as constituents.



## 2.2 Security Considerations

If 2 or more securities from the same issuer are eligible for inclusion in the index, only the security with the highest 3-month ADTV will be admitted for inclusion in the index.

All share classes are admitted into the Index.

## 3. INDEX WEIGHTING

On the Determination Day, index constituents are weighted using a modified free float market capitalization algorithm adjusted by the Vested Impact Score as follows:

1. Z-Scores of the free float market capitalizations are generated:

$$ZScore_n = \frac{FFMC_n - \mu}{\sigma}$$

Where:

$n$  is a constituent in the final portfolio

$FFMC_n$  is the free float market capitalization of constituent  $n$

$\mu$  is the mean of the free float market capitalizations of all constituents

$\sigma$  is the Standard Deviation of the free float market capitalizations of all constituents

2. Z-Scores are Winsorized to a value of 2.

$$\begin{aligned} ZScore_n > 2 &\rightarrow 2 \\ ZScore_n < -2 &\rightarrow -2 \end{aligned}$$

3. Z-Scores are turned into positive values:

$$\begin{aligned} ZScore_n > 0 &\rightarrow 1 + ZScore \\ ZScore_n < 0 &\rightarrow (1 - ZScore)^{-1} \end{aligned}$$

4. The positive Z-Score values are multiplied by the Vested Impact Scores to determine the Weighting Factors:

$$Weighting Factor_n = ZScore_n * Vested Impact Score_n$$

5. Constituents are weighted proportionally to their Weighting Factors:

$$Weight_n = \frac{WF_n}{\sum_{n=1}^i WF_n}$$

## 4. INDEX CAPPING

Once the initial constituent weights are set as in the previous section, each constituent weight is further iteratively reviewed and adjusted (if required) according to the following combined methodology.



## 4.1. Liquidity Capping

The initial weights of each constituent are reviewed and adjusted (if required) through a liquidity optimization process that limits single day trading to 25% of value traded for any constituent given a theoretical \$25,000,000 inflow.

The liquidity-adjusted weights are iteratively calculated as follows:

i) Liquidity thresholds are set:

- 90-day Average Daily Value Traded (**ADV<sub>\$i</sub>**) for the *i*-th constituent is calculated based on daily closing price and number of shares traded;
- The **ADTV** threshold (**ADTVTH**) for the Percentage of 90-day Average Daily Value Traded (**ADV%<sub>i</sub>** for the *i*-th constituent) is set to 25%;
- Investment threshold **ITH** is set to \$25,000,000;
- Liquidity threshold weight for the *i*-th constituent is calculated based on the investment threshold **ITH** and **ADTVTH** as follows:

$$W'_i = \left( \frac{ADTVTH \times ADV\$_i}{ITH} \right)$$

ii) The **ADV%<sub>i</sub>** for the *i*-th constituent is determined given the investment threshold **ITH** and the calculated weight of the constituent using the following equation:

$$ADV\%_i = \left( \frac{W_i \times ITH}{ADV\$_i} \right)$$

Where:

**W<sub>i</sub>** is the calculated weight of the *i*-th constituent

**ADV%<sub>i</sub>** = Percentage of 90-day Average Daily Value Traded for the *i*-th constituent

**ADV\$<sub>i</sub>** = 90-day Average Daily Value Traded for the *i*-th constituent

iii) If the constituent **ADV%<sub>i</sub>** is less than the **ADTVTH**, then that weight does not need to be adjusted until step (iv.b) below. If none of the constituents has **ADV%<sub>i</sub>** greater than the **ADTVTH**, then none of the weights need to be adjusted for liquidity threshold which concludes this part of the weighting process (skip to step (v) below).

iv) If the **ADV%<sub>i</sub>** for one or more constituents is greater than the **ADTVTH**, then the threshold weight **W'<sub>i</sub>** is assigned to each of them respectively, such that the **ADV%<sub>i</sub>** is equal to the **ADTVTH** for each such constituent: **W<sub>i</sub> = W'<sub>i</sub>**. The excess weights are redistributed among the remaining constituents which have **ADV%<sub>i</sub> < ADTVTH** in the following steps:

- The aggregate difference between the initial and adjusted weights of those constituents where the **ADV%<sub>i</sub>** is greater than the **ADTVTH** is distributed on a pro-rata basis among stocks where the **ADV%<sub>i</sub>** is less than the **ADTVTH**, using the following equation:



$$W_{adj,i} = \frac{W_i | ADV\%i < ADTVTH}{\sum_{j | ADV\%j < ADTVTH} W_j} \times \sum_{k | ADV\%k > ADTVTH} (W_k - W'_k)$$

Where:

$W_{adj,i}$  is the pro-rata adjustment for the index weight of the  $i$ -th constituent where the  $ADV\%i$  is less than the  $ADTV$  Threshold  $ADTVTH$ ;

$W_i$  is the liquidity weight threshold defined in Step (i.d) above.

The summation limits indicate which constituents' weights are in scope: those with  $ADV\%i$  greater or lower than the  $ADTV$  Threshold  $ADTVTH$ .

- b. The weight of constituents with an  $ADV\%i$  lower than the  $ADTV$  Threshold are adjusted as follows:

$$W''_i = W_i + W_{adj,i}$$

Where:

$W_i$  is the weight of the  $i$ -th constituent which has  $ADV\%i$  lower than the  $ADTV$  Threshold

$W''_i$  is the modified weight of each constituent where  $ADV\%i$  is lower than the  $ADTV$  Threshold

$W_{adj}$  is the adjustment for index weight of the  $i$ -th constituent where the  $ADV\%i$  is lower than the  $ADTV$  Threshold

v) Finally, the value of the capped weight  $W_i$  is reassigned to value of the  $W''_i$ :  $W_i = W''_i$ . The Steps (ii) through (iv) are repeated iteratively until all constituents' Percentage of Average Daily Value Traded is less than or equal to the  $ADTV$  Threshold.

#### 4.2. Individual Security Capping

To avoid undue concentration, the weights of all index constituents after each iteration of liquidity adjustment are subject to the following capping constraints:

- The weights of each issuer cannot exceed 5% of the total index weight.
- The cumulative weight of all constituents representing more than 4.5% of the index cannot exceed 40% of the total index weight.

The weights in excess are redistributed proportionally among the rest of the uncapped securities.

Once the individual security capping conditions outlined in section 4.2 are satisfied, the liquidity-based capping may need to be reiterated on additional cycles on each determination date.

This iterative process of satisfying both capping criteria is repeated until neither of the two rules is breached.



### **4.3 Individual Security Flooring**

After all capping constraints have been satisfied, the weights of all index constituents are subject to the following flooring constraints:

- A soft floor of 0.5% is applied to all securities.
- In cases where securities have been liquidity capped at less than 0.5%, the floor is relaxed for these securities to allow for liquidity capping.

## **5. INDEX REVIEW SCHEDULE**

### **5.1. Ordinary Adjustments**

The Index is reconstituted and rebalanced semiannually in March and September at the Close of Business (COB) on the 3rd Friday of the rebalancing month after market close.

The Determination Date for ordinary adjustments occurs at the COB on the 1st Friday of the rebalancing / reconstitution month.

BITA provides constituent pro-forma files each time the Index rebalances. Pro-forma files are normally released daily, covering the period between the Determination and Effective dates (proforma period).

Deletion Replacement rules: None.

### **5.2. Extraordinary Adjustments**

BIMB may decide to substitute an index constituent or perform an extraordinary adjustment to the index upon the occurrence of an extraordinary event as deemed by BIMB or according to the “[BITA Corporate Actions Treatment Guide](#)”. In such cases, BITA will announce the index adjustment with a notice period of at least 2 trading days (with respect to the affected constituent) on BITA’s website and proceed to its implementation after the close of business on the effective date as specified in the aforementioned announcement.



# Index Calculation

## 1. INDEX FORMULA

The index value is calculated every 1 second with the updated price from its constituents using the following formula:

$$Index\ Value_t = \sum_i \frac{P_{i,t} * IWF_{i,t} * TOS_{i,t} * AWF_{i,t} * F_{i,t}}{D_t}$$

Where:

**P<sub>i,t</sub>**= Price of the constituent ‘i’ at time t

**IWF<sub>i,t</sub>**= Investable Weighting Factor of constituent ‘i’ at time ‘t’

**TOS<sub>i,t</sub>**= Total no. of Shares Outstanding of constituent ‘i’ at time ‘t’

**AWF<sub>i,t</sub>**= Adjustable Weighting Factor for constituent ‘i’ at time ‘t’

**F<sub>i,t</sub>**= Foreign exchange Rate for constituent ‘i’ at time ‘t’

**D<sub>t</sub>**= Divisor Value at time ‘t’

The initial divisor (at inception **t = t<sub>0</sub>**) value is calculated according to the following formula:

$$D_{t_0} = \frac{\sum_i (P_{i,t_0} * IWF_{i,t_0} * TOS_{i,t_0} * AWF_{i,t_0} * F_{i,t_0})}{Initial\ Index\ Value}$$

On each Adjustment Day t, the divisor is adjusted to keep the index value constant. The new divisor is calculated as:

$$D_{t+1} = D_t + \frac{Change\ in\ Market\ Cap\ of\ the\ Index}{Index\ Value_t}$$

The new divisor is then used in the calculation of the following day’s index open.

## 2. COMPUTATIONAL ACCURACY

The index will be calculated to 13 decimal figures.

Index values will be rounded to 2 decimal places for dissemination.

## 3. INDEX DIVISOR ADJUSTMENTS

The market capitalization of the index is affected by numerous events other than daily security price changes. At the company level, market capitalizations are affected by share changes caused by corporate actions such as takeovers, acquisitions and spin-offs. Changes also result from company additions and deletions to the index.



In order to insulate the members of the index from the effects of index constituent changes and corporate actions, the index's market capitalization is divided by an adjustment factor called the index divisor. During the trading day, the index is computed by dividing the index's current market capitalization by the divisor value. If there are no corporate actions or constituent changes, the divisor remains unchanged for the next trading day. If there is an event resulting in a capitalization change, the index's new adjusted base market cap is calculated after the close using the adjusted prices and adjusted share figures. Then, a new divisor is calculated for use at the opening on the next trading day. The new divisor links the closing index value to the new adjusted base market capitalization of the index.

## 4. DIVIDENDS AND OTHER DISTRIBUTIONS

For the purposes of the index adjustment, BITA distinguishes between Cash dividends and Special dividends. Cash dividends are treated differently depending on the type of Index.

In a Price Return Index, regular Cash dividends are neglected and only the Special dividends are considered.

In a Gross Total Return Index, reinvestments of Cash and Special dividend distributions are considered without performing deductions due to withholding taxes.

In a Net Total Return Index, reinvestments of Cash and Special dividend distributions are considered after deducting the withholding tax.

Dividend payments and other distributions will lead to a change in the value of the divisor. The new Divisor is calculated as follows:

$$D_{t+1} = \frac{\text{Index Market Cap Open}_{t+1}}{\text{Index Value at Close}_t}$$

For detailed information on dividends treatment, please refer to the "[BITA's Corporate Action Treatment Guide](#)".

## 5. CORPORATE ACTIONS AND OTHER ADJUSTMENTS

All corporate actions and events will be monitored and processed as per the rules and methodologies explicit in "[BITA's Corporate Action Treatment Guide](#)".

Shares outstanding for constituents change regularly due to a variety of events and corporate actions. Share changes of less than 10% are implemented at the Ordinary Index Reviews.

If the number of outstanding shares for an index constituent change by more than 10% due to a corporate action, such as those listed in BITA's Corporate Actions Treatment Guide, the company's share outstanding will be updated after the close of trading on the day prior to the ex-date of the corporate action.

In case of constituents from different countries and/or regions, it is possible that a business day in one country would be a public holiday in the other. In all such cases, the business day is considered valid, and the index is calculated and disseminated just like in the normal index days. For the constituents that



have a public holiday (i.e. no price movement) on index business day, the real-time forex rate is the only factor contributing to changes in the value of such constituents. In case that the public holiday is in the base currency of the index, then the constituent's prices are kept constant throughout the day.

## 6. CORRECTION AND RECALCULATION

To ensure accuracy, timeliness and consistency of indexes that accurately reflect economic realities, BITA has implemented an Index Correction and Recalculation Policy. Our policy has been drafted in accordance with the IOSCO Principles and the EU Benchmark Regulation directives.

As per our Index Correction and Recalculation Policy, processes are in place to reduce error likelihood, ensure timeliness of identification, avoid subjectivity of corrective decisions and mitigate impact to clients.

While every effort is taken to ensure the accuracy of the index inputs, information and calculation, there is no guarantee that the index will be error-proof. Errors may occur due to data input errors, technology errors, application errors or other reasons.

Any Correction or Restatement made to an Index will be normally communicated to clients via email channels. The communication is done in a standardized format including an explanation of the error, the proposed rectification, and the effective date of implementation. BITA's customer service and product development teams stand always available for any additional clarification if necessary. Upon request, error reports are made available to clients.

For detailed information on specific errors, implementation timing and correction processes, please refer to the ["BITA Correction and Recalculation Policy"](#).

## 7. MARKET DISRUPTION

In periods of market stress, that might result in inaccurate market prices, delayed data inputs, illiquid constituents or fragmented markets, BITA calculates the Index following predetermined procedures as set out in its ["BITA Index Termination and Business Continuity Policy"](#), available at BITA's website.



# Index Governance and Miscellaneous

## 1. METHODOLOGY ADJUSTMENTS AND REVIEWS

The Index Methodology is reviewed on an annual basis by both the BITA Index Management Board and the BITA Oversight Committee, to make sure the Index continues to reflect the economic realities of the market and is not based on obsolete inputs or assumptions.

In case an adjustment to the Methodology is required, a detailed written “[BITA Index Methodology Policy](#)” outlines the steps and approvals required to develop, document and approve the Index and its Methodology. The purpose of the BITA Index Methodology Policy is to ensure that the methodology of the Index meets the requirements of Article 12 of the BMR and is implemented according to a robust and reliable process.

## 2. INDEX TERMINATION

When designing an index, BITA puts significant efforts in ensuring that its indexes are sustainable and can stay relevant over time. However, there might be situations (cases where an index ceases to reflect the economic reality of the market it represents, needs data that can no longer be obtained, or fails to keep achieving its objectives) where a cessation of the index may be indicated. For such cases, BITA has developed and adopted an “[Index Termination Business Continuity Policy](#)”, that includes the specific processes to identify such events, communicate and consult stakeholders, and setup potential transition plans to reduce the impact for customers and stakeholders.

## 3. INDEX GOVERNANCE BODIES

### **3.1. BITA Oversight Function**

The BITA Oversight Function is responsible for the oversight of all aspects related to the provision of benchmarks administered by BITA. The Oversight Function will receive updates from first-line internal governance bodies where appropriate.

### **3.2. BITA Index Management Board (BIMB)**

The BITA Index Management Board (BIMB) is responsible for decisions regarding the index composition as well as any changes to the rulebooks and methodology guides. The board also decides about the future composition of the index if any “Extraordinary Event” occurs and requires necessary adjustments.



## 4. IMPACT & ESG FACTORS DISCLOSURE

### 4.1. Explanation of how ESG Factors are reflected in the key elements of the benchmark methodology

Name of the benchmark administrator.	BITA GmbH
Type of benchmark or family of benchmarks. Choose the relevant underlying asset from the list provided in Annex II to Commission Delegated Regulation (EU)2020/1816.	Equity
Name of the benchmark or family of benchmarks.	BITA CIRCA5000 Green Energy & Technology Impact Index
Does the benchmark methodology for the benchmark or family of benchmarks take into account ESG factors?	Yes

Please explain how those ESG factors are used for the selection, weighting or exclusion of underlying assets.

(a) List of environmental factors considered:	<p><b>By Exclusion:</b></p> <ul style="list-style-type: none"> <li>All companies with a Vested Net Impact Score below 0, a negative impact score above 30 or a positive impact score below 30 as far as the rating process, which combines environmental, social and governance aspects, considers environmental factors. Companies included on the BITA CIRCA5000 StayAway Exclusion List due to business involvement or controversial conduct related to environmental issues are also excluded.</li> </ul> <p><b>By Selection:</b></p> <ul style="list-style-type: none"> <li>Companies with the highest positive impact scores as rated by Vested Impact as far as the rating process, which combines environmental, social and governance aspects, considers environmental factors.</li> </ul> <p><b>By Weighting:</b></p> <ul style="list-style-type: none"> <li>Vested Impact Score as far as the rating process, which combines environmental, social and</li> </ul>
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	governance aspects, considers environmental factors
(b) List of social factors considered:	<p><b>By Exclusion:</b></p> <ul style="list-style-type: none"> <li>All companies with a Vested Net Impact Score below 0, a negative impact score above 30 or a positive impact score below 30 as far as the rating process, which combines environmental, social and governance aspects, considers social factors. Companies included on the BITA CIRCA5000 StayAway Exclusion List due to business involvement or controversial conduct related to social issues are also excluded.</li> </ul> <p><b>By Selection:</b></p> <ul style="list-style-type: none"> <li>Companies with the highest positive impact scores as rated by Vested Impact as far as the rating process, which combines environmental, social and governance aspects, considers social factors.</li> </ul> <p><b>By Weighting:</b></p> <ul style="list-style-type: none"> <li>Vested Impact Score as far as the rating process, which combines environmental, social and governance aspects, considers social factors</li> </ul>
(c) List of governance factors considered:	<p><b>By Exclusion:</b></p> <ul style="list-style-type: none"> <li>All companies included on the BITA CIRCA5000 StayAway Exclusion List as far as the identification process, which combines environmental, social and governance aspects, considers governance factors.</li> </ul> <p><b>By Selection:</b></p> <ul style="list-style-type: none"> <li>Companies are not selected based on good governance factors.</li> </ul> <p><b>By Weighting:</b></p> <ul style="list-style-type: none"> <li>The weighting process does not take into account governance factors.</li> </ul>



## Data and standards used:

<p>(a) Data input.</p> <p>(i) Describe whether the data are reported, modelled, or sourced internally or externally.</p> <p>(ii) Where the data are reported, modelled, or sourced externally, please name the third-party data provider.</p>	<p>ESG Business Involvement and Conduct Screening Data in controversial businesses and controversial conduct ("Controversy Filter") is internally researched and generated by BITA and CIRCA5000.</p> <p>Vested Impact Scores as well as their ratings are sourced externally from Vested Impact. The Vested Impact Scores measure the overall impact performance of a company's products and services against the United Nations Sustainable Development Goals.</p>
<p>(b) Verification and quality of data.</p> <p>(i) Describe how data are verified and how the quality of those data is ensured.</p>	<p>ESG Business Involvement and Conduct Screening Data:</p> <p>Companies are attributed a business involvement exposure equivalent to the business involvement revenue proportion in relation to the companies' total revenue.</p> <p>Each company's business involvement revenue is determined using publicly available data provided by the company through regulatory filings such as 10-Ks, 10-Qs, 20-Fs, 8-Ks and other similar regulatory filings, quarterly earnings reports, company presentations and/or official earnings conference call transcripts. A direct engagement with the company can also occur should clarification be required with respect to publicly disclosed information.</p> <p>Companies are also assessed against a framework of controversial conduct activities</p> <p>Vested Impact Scores:</p> <p>Data quality is a key part of the collection process. Vested use a combination of both algorithmic and human processes to make sure they</p>



	<p>achieve as close to 100% data quality as possible.</p> <p>Formal in-depth quality review processes take place at each stage of analysis, including automated and quality checks of data and rating publication; industry and market lead oversight of ratings and reports; and ESG Ratings Methodology.</p> <p>Companies are monitored on a systematic and ongoing daily basis, including monitoring of the impact data sources. New information, from either the company or impact indicators, is reflected in reports when detected. Noting most significant changes in impact often occur on a quarterly basis, and any significant changes to scores (beyond a threshold of +/-10%) trigger analyst review and re-rating.</p>
<p>c) Reference standards.</p> <p>(i) Describe the international standards used in the benchmark methodology.</p>	<p>The index methodology is constructed in line with the IOSCO standards for financial benchmarking, as well as market standards required by the Regulation (EU) 2016/2011 “Benchmark Regulation” (BMR).</p>
Information provided on:	31.01.2024
Reason for update:	Initial document creation

## **4.2. Further details of how impact Factors are reflected in the key elements of the benchmark methodology**

As explained above, the Index intends to go beyond ESG to include companies that have positive social or environmental impacts. Vested Impact Ltd., the independent impact rating agency, uses an impact assessment methodology aligned with the Impact Management Project, Operating Principles for Impact Management, and Norms to identify and assess a company’s positive and negative impacts. The Vested Impact platform integrates reporting standards such as the UN Sustainable Development Goals, EU CSRD, whilst also adopting the terminology, definitions of the OECD Due Diligence Guidance for Responsible Business Conduct and allows the indices to be in step with the reporting regulations in force. Below is a high-level summary of the Vested Impact rating methodology

### **Summary:**

#### **1. Vested Impact Ratings Measure Methodology**

Vested Impact's Impact Algorithm can help investors, asset managers and companies to understand impact and impact opportunities and integrate these factors into their portfolio construction and management process.

Vested Impact's algorithm is based on a methodology built by experienced impact analysts, leveraging and combining the best impact measurement methodologies in the world to be able to attribute and quantify impact, focusing on the intersection between a company's core business activities and markets, and the social issues that can create significant risks and opportunities for the company.

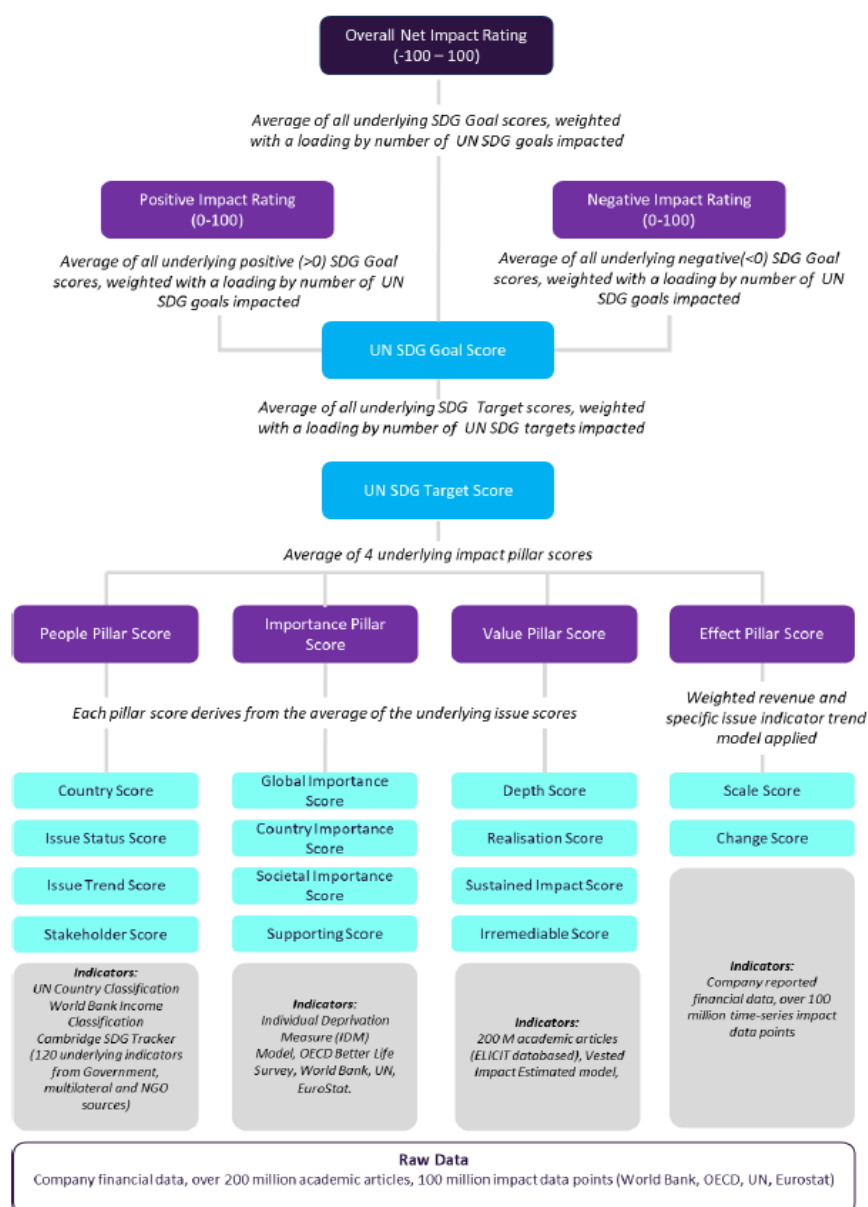
Vested Impact strongly incorporates the pillars and approach of the Impact Management Project, whilst also adopting the terminology, definitions of the OECD Due Diligence Guidance for Responsible Business Conduct which directly aligns with regulatory requirements for companies and assets such as the EU CSRD, EU CSDDD. Detailed mapping of Vested Impact to regulatory frameworks such as SFDR and TCFD is available on request.

The algorithm assesses the impact of assets at an activity level; leverage language models to determine an assets underlying business products, services, and activities. The algorithm then leverages over 200,000,000 academic articles to provide science-based evidence for the causal link of individual business activities against the issues they impact (relevant to different geographies) and pulls on over 100,000,000 data points from over 1,500 impact organizations to validate the impact across each activity, country and SDG Target combination (which are referred to as "impact slices"); assessing the impact against 4 core pillars that are consistent across all companies, to produce an absolute impact rating for a company; as well as underlying impact metrics on each "impact slice" allowing for deep and nuanced impact strategies.

## **2. Scores Structure Overview**

The detail of each pillar and tier in the scores is outlined in the **Automated Impact Assessment & Measurement Methodology** document issued by Vested Impact Ltd, however the below diagram gives a summary of the aggregation and hierarchy of impact scores to produce the overall net impact rating.





### 3. Impact Scores Overview

Overall Net Impact Rating	The Overall Net Impact Rating is a quantification of the <b>quality</b> of the company's activity/s, as a weighted average of the company's positive and negative impact scores.
Positive Impact Score	The Positive Impact Score is the weighted average of the overall degree of positive impact the company's activities deliver.
Negative Impact Score	The Negative Impact Score is the weighted average of the overall degree of negative impact the company's activities deliver

#### 4. Impact Score Ranges

Score Range	Status	Description
75-100	Very High Positive Impact	A very high impact company has products and services that directly serve society and the environment on issues that are most important and delivers value with little negative impacts
50 - 74	High Positive Impact	A high impact company has a very significant impact on issues that are important and serving in need stakeholders, and generally has low negative impacts
25-49	Medium Positive Impact	A medium impact company has a significant impact on issues that are important and serving in need and vulnerable stakeholders.
1-24	Low Positive Impact	A company scoring Low Impact has minimal or undiscernible significant positive benefits on social issues through their products and services and/or has significant negative impacts
If a company scores below 0 they are deemed to be doing more harm than good where their negative impacts clearly outweigh any positive impacts delivered.		
0 - -24	Low Negative Impact	A low negative impact company has net overall more negative impact than positive, however their negative impacts are only minimally more than any positive impacts
-25 - -49	Medium Negative Impact	A medium negative impact company has significant negative impacts on reasonably important and/or vulnerable stakeholders, and their negative impacts significantly outweigh any positive impacts.
-50 - -74	High Negative Impact	A high negative impact company has very significant negative impacts on issues that are important and impacting in need and vulnerable stakeholders, and generally has low positive impacts
-75 - -100	Very High Negative Impact	A very high negative impact company has products and services that directly counteract progress and deliver severe negative impacts on societal and the environmental issues that are most important, and delivers value little negative impacts



## 5. Impact Ratings & Scores

### - **Overall Net Impact Rating**

The Impact Rating is effectively a quantification of the overall net impact of the company's activity/s, as a weighted average of the company's positive and negative impact scores.

$$\text{Overall Net Impact} = \text{Overall Positive Impact} - \text{Overall Negative Impact}$$

To arrive at a final Impact Rating, the weighted average of individual Impact Area Scores is taken, per SDG Target. Then the SDG Target Impact Ratings are averaged and any activity and geographic weights are applied at the Target Rating level before being averaged into the overall Impact Rating. Any negative impact weightings are applied to the Overall Net Impact Rating.

Each company's Impact Rating corresponds to a rating between best (100) and worst (-100). The Impact Rating is an absolute value, explicitly intended to allow comparison across industries, and the Impact Rating is not normalized relative to Industry peers.

### - **Positive Impact Rating**

The Positive Impact Score is the weighted average of the overall degree of positive impact the company's activities deliver, and a loading is applied when multiple SDG Targets within a single goal are impacted.

$$\text{Positive Impact Rating} = \frac{\text{SUM}(\text{weighted score of each SDG Target positively impacted})}{\text{Total SDG Targets positively impacted}}$$

$$\text{Weighted score of each SDG Target} = (\text{SDG Target Score} * \text{Loading}) + \text{SDG Target Score}$$

$$\text{Loading} = \frac{\text{Total SDG Targets positively impacted}}{100}$$

### - **Negative Impact Rating**

The Negative Impact Score is the weighted average of the overall degree of negative impact the company's activities deliver, and a loading is applied when multiple SDG Targets within a single goal are impacted.

$$\text{Negative Impact Rating} = \frac{\text{SUM}(\text{weighted score of each SDG Target negatively impacted})}{\text{Total SDG Targets negatively impacted}}$$

$$\text{Weighted score of each SDG Target} = (\text{SDG Target Score} * \text{Loading}) + \text{SDG Target Score}$$

$$\text{Loading} = \frac{\text{Total SDG Targets negatively impacted}}{100}$$



## 5. TERMINOLOGY

**Adjustable Weighting Factor (AWF)** is the adjustment factor introduced in the index calculation formula so that the index constituent weight capping factor is satisfied. No AWF changes occur due to corporate actions between rebalancing.

The AWF for each constituent on the determination date is calculated as:

$$AWF = \frac{CW}{W}$$

Where CW is the Capped Weight of that index constituent calculated on the determination date, and W is the uncapped weight (based on the free-float market capitalization) of that index constituent calculated on the determination date.

**Adjustment Day** is the day in which adjustments to the index divisor are performed. This could be days where reconstitution and rebalancing happen, or alternatively days before the ex-date of a corporate action.

**Average Daily Traded Value** of a stock is the sum of the Daily Traded Value over a specified period divided by the number of trading days over that specified period.

**BITA Assigned Country** is a composite country flag, determined by BITA, based on publicly available information regarding the companies' country of incorporation, country of headquarters and country of primary operations.

**Benchmark Regulation (BMR)**: Regulatory regime for benchmark administrators that ensures the accuracy and integrity of benchmarks. Regulation (EU) 2016/1011 of the European Parliament and of the Council of 8 June 2016 governing Indices used as benchmarks in financial instruments and financial contracts or to measure the performance of investment funds and amending Directives 2008/48/EC and 2014/17/EU and Regulation (EU) No 596/2014.

**Business Day** is a day on which an exchange is open for the buying and selling of securities, generally occurring on weekdays between normal business hours.

**Capping Factor** is the factor that limits the weight of any index constituent to a maximum pre-defined limit.

**Coordinated Universal Time (UTC)** is the primary time standard by which the world regulates clocks and time.

**Daily Traded Value** of a stock is the product of the closing price of that stock and the number of shares traded on the exchange on that business day.

**Determination Date** is the date (at end of day) used as a reference for the determination of index constituents, as well as index shares and parameters, which are to be applied at rebalancing/reconstitution.



**End of Day (EoD) Index Values** are the official index close levels calculated and stored, using official exchange close prices, at the end of each business day.

**ET time:** Eastern Time is five hours behind the Coordinated Universal Time standard, written as an offset of UTC - 5:00. That means to find the standard time in the zone one must subtract five hours from Coordinated Universal Time. During the daylight-saving adjustment period (March-October), the difference is four hours.

**CET time:** Central European Time is one hour ahead of the Coordinated Universal Time standard, written as an offset of UTC + 1:00. That means to find the standard time in the zone one must add one hour to Coordinated Universal Time. During the daylight-saving adjustment period (March-October), the difference is two hours.

**Extraordinary events** are extreme market events that make index adjustments necessary. These events include:

- Merger
- Takeover bid
- Delisting
- Insolvency

For an exhaustive list, please refer to [BITA Equity Corporate Actions Treatment Guide](#).

**Gross Total Return Index** is obtained by reinvesting in the ordinary gross dividends declared by the index constituents, and assumes that any cash distributions, such as dividends, are reinvested assuming zero tax rate applicability on such cash distributions.

**Net Total Return Indexes** is obtained by reinvesting in the index the ordinary net dividends (i.e fewer withholding taxes) declared by the index constituents, and assumes that any cash distributions, such as dividends, are reinvested with the corresponding tax rate applied on such cash distributions.

**Price Return Indexes** is obtained by tracking the plain prices of the index constituent instruments, unadjusted with the respect to any possible dividends or other cash payouts from the instruments.

**Inception Date** refers to the official start date of the index, with the index base value as close value.

**Investable Weighting Factor (IWF)** is the percentage of shares outstanding that are included in the index calculation. In the case of Float-Adjusted Market Cap Weighted Indexes, the total shares outstanding are adjusted so that they exclude from the index calculation all shares not freely available to investors.

BITA uses fundamental data from a variety of recognized data vendors to calculate the IWF for each of its index constituents.

The **IWF** is calculated as:

$$IWF = \frac{TOS - SCH}{TOS}$$



Where **TOS** is the total number of shares outstanding, **SCH** is the number of shares restricted to investors.

Free float factors are reviewed on a regular basis in line with the rebalancing/reconstitution schedule using the most recent available data.

Changes to the number of shares due to stock dividends, splits, rights issues etc. are implemented immediately and effective the next trading day.

In case of other corporate actions and events, if there is a change of more than 10% in the SOC, BITA will announce the update in SOC immediately and the adjustment comes into effect two trading days after the announcement. All other applicable changes are announced on the next underlying data announcement date, implemented on the index review date and effective the next trading day after implementation.

**Market Capitalization** is calculated as the product of the number of shares outstanding of the share class and the share price.

The index **Divisor** is an arbitrary number that is first defined when an index is first published. Its initial use is to divide the total value of the index to produce an index value that is easy to handle. Subsequently, the index divisor remains constant and requires adjustments, either when rebalancing and reconstituting or through corporate action treatments.

**Pro-forma Files** distributed to Index subscribers during the Pro-forma Period (i.e. the period between the determination date and the effective date of the upcoming rebalancing/reconstitution) contain the preliminary index weights, index shares and other relevant parameters for the upcoming rebalancing/reconstitution. While the index shares remain constant (unless affected by corporate actions) during the Pro-forma Period, the index weights will move along with the market.

**Total Number of Shares Outstanding (TOS)** of an index constituent on any given business day refers to a company's stock currently held by all its shareholders, including share blocks held by institutional investors and restricted shares owned by the company's officers and insiders.



## 6. DISCLAIMER

All information is provided for information purposes only. All information and data contained in this publication are obtained by BITA from sources believed by it to be accurate and reliable. Because of the possibility of human and mechanical error as well as other factors such information and data are provided “as is” without warranty of any kind.

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# Annex

## A. LIST OF ACCEPTED EXCHANGES

Australian Stock Exchange	XASX
Bolsas y Mercados Espanoles	BMEX
Borsa Italiana	XMIL
Deutsche Börse	XETR
Euronext Amsterdam Stock Exchange	XAMS
Euronext Brussels	XBRU
Euronext Irish Stock Exchange	XDUB
Euronext Lisbon	XLIS
Euronext Oslo Børs	XOSL
Euronext Paris Exchange	XPAR
Hong Kong Stock Exchange	XHKG
Korea Exchange	XKRX
Kosdaq	XKOS
London Stock Exchange	XLON
Nasdaq Copenhagen	XCSE
Nasdaq Helsinki	XHEL
Nasdaq Stock Exchange	XNAS
Nasdaq Stockholm	XSTO
New York Stock Exchange	XNYS
NYSE American	XASE
NYSE Arca	ARCX
Singapore Exchange	XSES
SIX Swiss Exchange	XSWX
Taipei Exchange	ROCO
Taiwan Stock Exchange	XTAI
Tel-Aviv Stock Exchange	XTAE
Tokyo Stock Exchange	XJPX
Toronto Stock Exchange	XTSE
TSX Venture Exchange	XTSX



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