MSCI Provisional Climate Change EU Climate Transition/ EU Paris-Aligned Indexes Methodology

November 2019

Contents

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1 Introduction

The European Commission's Technical Expert Group on Sustainable Finance's Final Report on Climate Benchmarks and Benchmarks' ESG Disclosures[1] (the "TEG Final Report") recommends a list of minimum technical requirements for the methodologies of 'EU Climate Transition Benchmarks' (CTB) and 'EU Paris-aligned Benchmarks' (PAB).

The MSCI Provisional Climate Change EU Climate Transition Indexes and MSCI Provisional Climate Change EU Paris-Aligned Indexes (""Provisional Indexes") are constructed from the corresponding MSCI Climate Change Indexes[2], taking into account the minimum requirements recommended in the TEG Final Report. The Provisional Indexes aim to represent the performance of an investment strategy that reweights securities based upon the opportunities and risks associated with the climate transition risks and opportunities while satisfying the corresponding minimum requirements as per the TEG Final Report.

Note, the Provisional Indexes are based on the TEG Final Report. The Provisional Indexes are ***not*** based on the final delegated acts and requirements for the CTB and PAB because the final delegated acts and requirements for the CTB and PAB are not yet published as of the date of this methodology (November 2019).

[1] https://ec.europa.eu/info/files/190930-sustainable-finance-teg-final-report-climate-benchmarks-and-disclosures_en

[2] For more details regarding the MSCI Climate Change Indexes, please refer to the MSCI Climate Change Indexes Methodology Book at https://www.msci.com/index-methodology.

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2 MSCI ESG Research

MSCI ESG Research provides in-depth research, ratings and analysis of the environmental, social and governance-related business practices of thousands of companies worldwide. It consists of an integrated suite of tools and products to efficiently manage research, analysis and compliance tasks across the spectrum of ESG factors.

The Index uses company ratings and research provided by MSCI ESG Research. In particular, this index uses the following MSCI ESG Research products: MSCI Climate Change Metrics, MSCI ESG Sustainable Impact Metrics, MSCI ESG Controversies and MSCI ESG Business Involvement Screening Research.

For details on MSCI ESG Research's full suite of ESG products, please refer to: https://www.msci.com/esg-integration

2.1 MSCI CLIMATE CHANGE METRICS

MSCI Climate Change Metrics is designed to support investors seeking to achieve a range of objectives, including measuring and reporting on climate risk exposure, implementing low carbon and fossil fuel-free strategies, and factoring climate change research into their risk management processes. It provides Carbon Emissions, Fossil Fuel exposure, environmental impact (i.e., clean technology) data and screens, as well as climate-related risk exposure and management assessment on companies.

For more details on MSCI Climate Change Metrics, please refer to https://www.msci.com/climate-change-solutions

2.2 MSCI ESG SUSTAINABLE IMPACT METRICS

MSCI ESG Research's Sustainable Impact Metrics is designed to identify companies that currently offer products or services that address at least one of the major social and environmental challenges as defined by the UN Sustainable Development Goals. Designed as a positive screen, it is designed to highlight companies that are deriving sales from products or services that may have a positive impact on society and the environment.

For more details on the MSCI ESG Sustainable Impact Metrics, please refer to https://www.msci.com/esg-sustainable-impact-metrics

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2.3 MSCI ESG CONTROVERSIES

MSCI ESG Controversies (formerly known as MSCI Impact Monitor) provides assessments of controversies concerning the negative environmental, social, and/or governance impact of company operations, products and services. The evaluation framework used in MSCI ESG Controversies is designed to be consistent with international norms represented by the UN Declaration of Human Rights, the ILO Declaration on Fundamental Principles and Rights at Work, and the UN Global Compact. MSCI ESG Controversies Score falls on a 0-10 scale, with “0” being the most severe controversy.

For more details on MSCI ESG Controversies, please refer to : https://www.msci.com/documents/10199/acbe7c8a-a4e4-49de-9cf8-5e957245b86b

2.4 MSCI ESG BUSINESS INVOLVEMENT SCREENING RESEARCH

MSCI ESG Business Involvement Screening Research (BISR) aims to enable institutional investors to manage environmental, social and governance (ESG) standards and restrictions reliably and efficiently.

For more details on MSCI ESG Business Involvement Screening Research, please refer to http://www.msci.com/resources/factsheets/MSCI_ESG_BISR.pdf

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3 Index Construction Methodology

3.1 MSCI Provisional Climate Change EU Climate Transition Indexes

The following section explains the steps in the construction of the MSCI Provisional Climate Change EU Climate Transition Indexes.

3.1.1. APPLICABLE UNIVERSE

The applicable universe includes all the existing constituents of the parent index ("Parent Index"). This approach aims to provide an opportunity set with sufficient liquidity and capacity.

3.1.2. MINIMUM REQUIREMENTS

The requirements[3] we impose for the MSCI Provisional Climate Change EU Climate Transition Indexes are detailed in Table 1.

Table 1: Requirements imposed for the Provisional Climate Change EU Climate Transition Indexes

Minimum Requirements[4]	MSCI Provisional Climate Change EU Climate Transition Indexes
Minimum reduction in Weighted Average Scope 1+2 Carbon Emissions Intensity (WACI) relative to Parent Index	30%
Minimum reduction in Weighted Average Potential Emissions Intensity relative to Parent Index	30%
Baseline Exclusions	• Controversial Weapons • ESG Controversy Score of 0
Minimum average reduction (per annum) in WACI relative to WACI at Inception	7%
Minimum ratio of Green Revenue/ Brown Revenue relative to Parent Index	At least equal

[3] as the requirements ensure adherence to the minimum requirements detailed in Table 1 in the TEG Final Report

[4] For details regarding the calculation of metrics used in the Minimum Requirements, please refer to Appendix II: Calculation of Target Metrics.

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Active weight in High Climate Impact Sector relative to Parent Index as defined in Section 3.1.5	0%
Corporate Target Setting	Increased allocation to companies which set evidence-based targets achieved by using the MSCI Climate Change Index Methodology

3.1.3. INITIAL UNIVERSE

Securities in the Parent Index are selected and reweighted following the rules described in Section 3 – Index Construction Methodology of the MSCI Climate Change Index methodology without capping the maximum issuer weight.

The MSCI Climate Change Indexes exclude stocks[5] involved in Controversial Weapons as defined by the Methodology of the MSCI Ex-Controversial Weapons Index Methodology.

3.1.4. ELIGIBLE UNIVERSE

The Eligible Universe is constructed from the Initial Universe by excluding securities of companies having faced very severe controversies pertaining to ESG issues – Defined as companies with an ESG Controversy Score[6] of 0.

3.1.5. INTERMEDIATE UNIVERSE

Each security in the Applicable Universe is classified into one of two climate impact sectors[7] based on its NACE section code. A stock can be assigned to either a 'High Climate Impact' or 'Low Climate Impact' sector. The Eligible Universe is broken into two smaller universes as described below:

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[5] Companies that are not rated by MSCI ESG Research for Low Carbon Transition Assessment are also excluded in the MSCI Climate Change Indexes Methodology.

[6] The evaluation framework used in MSCI ESG Controversies is designed to be consistent with international norms represented by the UN Declaration of Human Rights, the ILO Declaration on Fundamental Principles and Rights at Work, and the UN Global Compact. For more details on MSCI ESG Controversies, please refer to www.msci.com/documents/esg-controversies

[7] Stocks in the NACE Section codes A, B, C, D, E, F, G, H, L are classified as "High Climate Impact" sector and other stocks are classified 'Low Climate Impact' sector. For further details regarding NACE, please refer to https://ec.europa.eu/eurostat/statistics-explained/index.php?title=NACE_background. The GICS Sub-Industry code for each security is mapped to the corresponding "Climate Impact Sector" using a provisional mapping. For further information regarding GICS, please refer to https://www.msci.com/gics

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3.1.5.1 HIGH CLIMATE IMPACT INTERMEDIATE UNIVERSE

High Climate Impact Intermediate Universe is constructed in following two steps –

- Select all securities in the High Climate Impact Sector from the Applicable Universe.
- Renormalize the weights of securities so that the aggregate weight of securities is equal to the weight of High Climate Impact Sector in the Parent Index.

3.1.5.2 LOW CLIMATE IMPACT INTERMEDIATE UNIVERSE

Low Climate Impact Intermediate Universe is constructed in following two steps –

- Select all securities in the Low Climate Impact Sector from the Applicable Universe.
- Renormalize the weights of securities so that the aggregate weight of securities is equal to the weight of Low Climate Impact Sector in the Parent Index.

3.1.6. FINAL UNIVERSE

The Final Universe is constructed by combining the High Impact Intermediate Universe and the Low Impact Intermediate Universe. The High Impact Sector and Low Impact Sector weights are equal to their respective weight in the Parent Index. The security weight within the High Impact and Low Impact sectors are in proportion of the security's LCT Category[8] and LCT Score. Compared to the Parent Index, the Final Universe typically has

- Lower Carbon Footprint
- Higher Green Revenue to Brown Revenue ratio
- Higher weight in companies which set emission targets
- Equal weight in High Impact and Low Impact Sector

The Final Universe is assessed against the minimum requirements detailed in Table 1. In case the Final Universe is found deficient on any of the minimum requirements, then the weights of the securities in the Final Universe are determined through an iterative process as described in Appendix IV.

[8] For details regarding the LCT Category and LCT Score, please refer to Appendix I: MSCI Low Carbon Transition Risk Assessment

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3.2 MSCI Provisional Climate Change EU Paris-Aligned Indexes

The construction of the MSCI Provisional Climate Change EU Paris-Aligned Indexes follow the index construction steps of the Provisional Climate Change EU Climate Transition as described in Section 3.1 with the following exceptions:

3.2.1. MINIMUM REQUIREMENTS

The requirements we impose for the Provisional Climate Change EU Paris-Aligned Indexes are detailed in Table 2.

Table 2: Requirements imposed for the Provisional Climate Change EU Paris-Aligned Indexes

Minimum Requirements	Provisional Climate Change EU Paris-Aligned Indexes
Minimum reduction in Weighted Average Scope 1+2 Carbon Emissions Intensity (WACI) relative to Parent Index	50%
Minimum reduction in Weighted Average Potential Emissions Intensity relative to Parent Index	50%
Baseline Exclusions	• Controversial Weapons • ESG Controversy Score of 0
Activity Exclusions	• Coal (1%+ revenues) • Oil & Gas (10%+ revenues) • Coal, Oil & Gas based power generation (50%+ revenues)
Minimum average reduction (per annum) in WACI relative to WACI at Inception	7%
Minimum ratio of Green Revenue/ Brown Revenue relative to Parent Index	At least a Factor of 4
Active weight in High Climate Impact Sector relative to Parent Index as defined in Section 3.1.5	0%
Corporate Target Setting	Increased allocation to companies which set evidence-based targets achieved by using the MSCI Climate Change Index Methodology

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3.2.2. ELIGIBLE UNIVERSE

In addition to the exclusions in Section 3.1.4, securities that meet any of the below criteria, corresponding to the Activity Exclusions for MSCI Provisional Climate Change EU Paris-Aligned Indexes are excluded from the Initial Universe.

1. All companies deriving 1% or more revenue (either reported or estimated) from the mining of thermal coal (including lignite, bituminous, anthracite and steam coal) and its sale to external parties. It excludes: revenue from metallurgical coal; coal mined for internal power generation (e.g. in the case of vertically integrated power producers); intra-company sales of mined thermal coal; and revenue from coal trading (either reported or estimated)
2. All companies deriving 10% or more revenue from the extraction and production of Conventional and Unconventional Oil & Gas[9]. Conventional Oil and Gas includes Arctic onshore/offshore, deepwater, shallow water and other onshore/offshore. Unconventional Oil and Gas includes oil sands, oil shale (kerogen-rich deposits), shale gas, shale oil, coal seam gas, and coal bed methane.
3. All companies deriving 50% or more revenue from thermal coal based power generation, liquid fuel based power generation and natural gas based power generation[10].

[9] While the minimum requirements for EU PAB Indexes recommend exclusion of companies which derive 10% or more of their revenues from Oil or 50% or more of their revenues from natural gas exploration or processing activities, The Provisional Indexes exclude all companies exclude all companies that derive 10% or more of their revenues from Oil and Gas.

[10] As per https://www.ipcc.ch/site/assets/uploads/2018/02/ipcc_wg3_ar5_chapter7.pdf, thermal coal based power generation, liquid fuel based power generation and natural gas based power generation have median lifecycle emissions exceeding 100gCO_2/kWh.

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3.2.3. FINAL UNIVERSE

The Final Universe is constructed by combining the High Impact Intermediate Universe and the Low Impact Intermediate Universe.

The High Impact Sector and Low Impact Sector weights are equal to their respective weight in the Parent Index. The security weight within the High Impact and Low Impact sectors are in proportion of the security's LCT Category and LCT Score. Compared to the Parent Index, the Final Universe typically has

- Lower Carbon Footprint
- Higher Green Revenue to Brown Revenue ratio
- Higher weight in companies which set emission targets
- Equal weight in High Impact and Low Impact Sector

The Final Universe is assessed against the minimum requirements detailed in Table 2. In case the Final Universe is found deficient on any of the minimum requirements, then the weights of the securities in the Final Universe are determined through an iterative process as described in Appendix IV.

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4 Maintaining the Provisional Indexes

4.1 SEMI-ANNUAL INDEX REVIEWS

The Indexes are rebalanced on a semi-annual basis, as of the close of the last business day of May and November, coinciding with the May and November Semi-Annual Index Review of the MSCI Global Investable Market Indexes. The pro forma Indexes are in general announced nine business days before the effective date.

In general, MSCI uses MSCI ESG Research data (including MSCI Climate Change Metrics, MSCI ESG Sustainable Impact Metrics, MSCI ESG Controversies and MSCI Business Involvement Screening Research) as of the end of the month preceding the Index Reviews for the rebalancing of the Provisional Indexes.

4.2 ONGOING EVENT RELATED CHANGES

The general treatment of corporate events in the Provisional Indexes aims to minimize turnover outside of Index Reviews. The methodology aims to appropriately represent an investor's participation in an event based on relevant deal terms and pre-event weighting of the index constituents that are involved. Further, changes in index market capitalization that occur as a result of corporate event implementation will be offset by a corresponding change in the Variable Weighting Factor (VWF) of the constituent.

Additionally, if the frequency of Index Reviews in the Parent Index is greater than the frequency of Index Reviews in the Provisional Index, the changes made to the Parent Index during intermediate Index Reviews will be neutralized in the Provisional Index.

The following section briefly describes the treatment of common corporate events within the Provisional Index.

No new securities will be added (except where noted below) to the Index between Index Reviews. Parent Index deletions will be reflected simultaneously.

EVENT TYPE	EVENT DETAILS
New additions to the Parent Index	A new security added to the parent index (such as IPO and other early inclusions) will not be added to the index.

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Spin-Offs	All securities created as a result of the spin-off of an existing Index constituent will be added to the Index at the time of event implementation. Reevaluation for continued inclusion in the Index will occur at the subsequent Index Review.
Merger/Acquisition	For Mergers and Acquisitions, the acquirer's post event weight will account for the proportionate amount of shares involved in deal consideration, while cash proceeds will be invested across the Index. If an existing Index constituent is acquired by a non-Index constituent, the existing constituent will be deleted from the Index and the acquiring non-constituent will not be added to the Index.
Changes in Security Characteristics	A security will continue to be an Index constituent if there are changes in characteristics (country, sector, size segment, etc.) Reevaluation for continued inclusion in the Index will occur at the subsequent Index Review.

Further detail and illustration regarding specific treatment of corporate events relevant to this Index can be found in the MSCI Corporate Events Methodology book under the sections detailing the treatment of events in Capped Weighted and Non-Market Capitalization Weighted indexes.

The MSCI Corporate Events methodology book is available at: https://www.msci.com/index-methodology

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Appendix I: MSCI Low Carbon Transition Risk Assessment

MSCI ESG Research's Low Carbon Transition Risk assessment[11] is designed to identify potential leaders and laggards by holistically measuring companies' exposure to and management of risks and opportunities related to the low carbon transition.

The final output of this assessment is two company-level factors as described below:

(1) **Low Carbon Transition Category**: This factor groups companies in five categories that highlight the predominant risks and opportunities they are most likely to face in the transition (Exhibit 1).

(2) **Low Carbon Transition Score:** This score is based on a multi-dimensional risks and opportunities assessment and considers both predominant and secondary risks a company faces. It is industry agnostic and represents an absolute assessment of a company's position vis-à-vis the transition.

LOW CARBON TRANSITION SCORE	LOW CARBON TRANSITION CATEGORY		LOW CARBON TRANSITION RISK / OPPORTUNITY	
Score = 0	ASSET STRANDING		Potential to experience "stranding" of physical / natural assets due to regulatory, market, or technological forces arising from low carbon transition.	Coal mining & coal based power generation; Oil sands exploration/production
	TRANSITION	PRODUCT	Reduced demand for carbon-intensive products and services. Leaders and laggards are defined by the ability to shift product portfolio to low-carbon products.	Oil & gas exploration & production; Petrol/diesel based automobile manufacturers, thermal power plant turbine manufacturers etc.
		OPERATIONAL	Increased operational and/or capital cost due to carbon taxes and/or investment in carbon emission mitigation measures leading to lower profitability of the companies.	Fossil fuel based power generation, cement, steel etc.
	NEUTRAL		Limited exposure to low carbon transition carbon risk. Though companies in this category could have exposure to physical risk and/or indirect exposure to low carbon transition risk via lending, investment etc.	Consumer staples, healthcare, etc.
Score = 10	SOLUTIONS		Potential to benefit through the growth of low-carbon products and services.	Renewable electricity, electric vehicles, solar cell manufacturers etc.

Exhibit 1: Low Carbon Transition Categories and Scores

[11] For more details on MSCI Climate Change Metrics, please refer to https://www.msci.com/climate-change-solutions

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Calculation methodology

The Low Carbon Transition Categories and Scores are determined by a combination of each company's current risk exposure and its efforts to manage the risks and opportunities presented by the low carbon transition. The 3-step process followed by MSCI ESG Research is explained below.

Step 1: Measure Low Carbon Transition Risk Exposure

The first step towards measuring the Low Carbon Transition Risk Exposure for a company is the computation of its Carbon Intensity profile – which is informed by its Product Carbon Intensity, Operational Carbon Intensity and Total Carbon Intensity. In the next step, we compute Low Carbon Transition Risk Exposure Category and Score based on Total Carbon Intensity.

Step 2: Assess Low Carbon Transition Risk Management

In the second step, we assess a company's management of risks and opportunities presented by the low carbon transition. This assessment is based on policies and commitments to mitigate transition risk, governance structures, risk management programs and initiatives, targets and performance, and involvement in any controversies.

Step 3: Calculate Low Carbon Transition Category and Score

In the final step, the Low Carbon Transition Risk Exposure Category and Score that was calculated in Step 1 are adjusted for the strength of management efforts. Following this adjustment, Low Carbon Transition Risk Exposure Score of companies with top or second quartile risk management improves and some top and second quartile companies may move up one category.

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Appendix II: Calculation of Target Metrics

Calculation of Weighted Average Carbon Emissions Intensity

MSCI ESG Research collects company-specific direct (Scope 1) and indirect (Scope 2) greenhouse gas (GHG) emissions data from company public documents and/or the Carbon Disclosure Project. If a company does not report GHG emissions, then MSCI ESG Research uses a proprietary methodology to estimate Scope 1 and Scope 2 GHG emissions.

For Parent Index constituents where the Scope 1+2 Emissions Intensity is not available, the average Scope 1+2 Emissions Intensity of all the constituents of the MSCI ACWI in the same GICS Industry Group in which the constituent belongs is used.

Security Level Carbon Emissions Intensity =

$$\frac{Scope\ 1+2\ Carbon\ Emissions}{Enterprise\ Value\ (in\ M\$)}$$

Weighted Average Carbon Emissions Intensity of Parent Index =

$$\sum (Weight\ in\ Parent\ Index * Security\ Level\ Carbon\ Emissions\ Intensity)$$

Weighted Average Carbon Emissions Intensity of Provisional Index =

$$= \frac{\sum (Average\ Weight * Security\ Level\ Carbon\ Emissions\ Intensity)}{\sum Average\ Weight}$$

The weights used for the calculation of the Weighted Average Carbon Emissions Intensity of the Provisional Index are the average weights over the current and previous Semi-Annual Index Review of the Provisional Index. The average weight will not be computed for securities which were not a part of the Provisional Index in the previous Semi-Annual Index Review.

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Calculation of Potential Carbon Emissions Intensity

MSCI ESG Research collects fossil fuel reserves data where relevant for companies which have reserves, typically in the Oil & Gas, Coal Mining and Electric Utilities industries. Fossil fuel reserves can be used for several applications including energy or industrial (e.g. coking coal used for steel production). For the development of the Provisional Indexes, only fossil fuel reserves used for energy are taken into account.

For newly added companies to the index where data is not available yet, MSCI uses zero fossil fuel reserves.

Security Level Potential Carbon Emissions Intensity =

$$\frac{Absolute\ Potential\ Emissions}{Enterprise\ Value\ (in\ M\$)}$$

WACI of Parent Index =

$$\sum(Weight\ in\ Parent\ Index * \ Security\ Level\ Potential\ Carbon\ Emissions\ Intensity)$$

WACI of Derived Index =

$$= \frac{\sum(Average\ Weight\ * \ Security\ Level\ Potential\ Carbon\ Emissions\ Intensity)}{\sum Average\ Weight}$$

The weights used for the calculation of the Weighted Average Potential Carbon Emissions Intensity of the Provisional Index are the average weights over the current and previous Semi-Annual Index Review of the Provisional Index. The average weight will not be computed for securities which were not a part of the Provisional Index in the previous Semi-Annual Index Review.

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Calculation of Average Decarbonization

On average, the Provisional Indexes follow a 7% decarbonization trajectory since Inception. The Weighted Average Carbon Intensity at Inception (W_1) is used to compute the target Weighted Average Carbon Intensity at any given Semi-Annual Index Review (W_t) as per the below formula.

$$W_t = W_1 * 0.93^{\frac{(t-1)}{2}}$$

Where 't' is the number of Semi-Annual Index Reviews since Inception.

Thus, for the 3rd Semi-Annual Index Review since Inception (t=3), the target Weighted Average Carbon Intensity will be W_1*0.93.

Calculation of Green Revenue to Brown Revenue Multiple

For each constituent in the Parent Index, the Green Revenue% is calculated as the cumulative revenue (%) from the five CleanTech themes which are as follows:

- Alternative Energy – Products, services, or infrastructure projects supporting the development or delivery of renewable energy and alternative fuels.
- Energy Efficiency – Products, services, infrastructure, or technologies that proactively address the growing global demand for energy while minimizing effects on the environment.
- Sustainable Water – Products, services, and projects that attempt to resolve water scarcity and water quality issues, including minimizing and monitoring current water use and demand increases, improving the quality of water supply, and improving the availability and reliability of water.
- Green Building – Building material suppliers; home builders; or property managers that directly support and have a confirmed commitment to achieving sustainable building standards (e.g. LEED, Energy Star Homes, or other recognized standards of sustainable building) for all new construction.
- Pollution Prevention – Products services, or projects focused on pollution prevention; waste minimization or recycling, as a means of alleviating the burden of unsustainable waste generation.

The Weighted Average Green Revenue% is calculated as:

$$= \sum(Weight\ in\ Index * Green\ Revenue\%)$$

For each constituent in the Parent Index, the Brown Revenue% is calculated as the cumulative revenue (%) from the following sources:

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- Revenue% (either reported or estimated) from the mining of thermal coal (including lignite, bituminous, anthracite and steam coal) and its sale to external parties. It excludes: revenue from metallurgical coal; coal mined for internal power generation (e.g. in the case of vertically integrated power producers); intra-company sales of mined thermal coal; and revenue from coal trading (either reported or estimated)
- Revenue% from the extraction and production of Conventional and Unconventional Oil & Gas. Conventional Oil and Gas includes Arctic onshore/offshore, deepwater, shallow water and other onshore/offshore. Unconventional Oil and Gas includes oil sands, oil shale (kerogen-rich deposits), shale gas, shale oil, coal seam gas, and coal bed methane.
- Revenue% from thermal coal based power generation, liquid fuel based power generation and natural gas based power generation.

The Weighted Average Brown Revenue% is calculated as:

$$= \sum (Weight\ in\ Index * Brown\ Revenue\%)$$

The Green Revenues to Brown Revenues multiple for either the Parent Index or the Provisional Index is calculated as a ratio of the Weighted Average Green Revenue to the Weighted Average Brown Revenue as per the formula below:

$$= \frac{Weighted\ Average\ Green\ Revenue\%}{Weighted\ Average\ Brown\ Revenue\%}$$

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Appendix III: Decarbonization Trajectory of Provisional Indexes

The Weighted Average Carbon Intensity at Inception (W_1) is used to compute the target Weighted Average Carbon Intensity at any given Semi-Annual Index Review (W_t) as per the below formula.

$$W_t = W_1 * 0.93^{\frac{(t-1)}{2}}$$

Where 't' is the number of Semi-Annual Index Reviews since Inception. The table below shows the Weighted Average Carbon Intensity at Inception (W_1) for each of the regions where the Provisional Indexes are constructed:

Provisional Index	Parent Index	Inception Date	W_1 (tCO2/M$ Enterprise Value)
MSCI ACWI Provisional Climate Change EU Climate Transition Index	MSCI ACWI	November 27, 2013	74.90
MSCI World Provisional Climate Change EU Climate Transition Index	MSCI World	November 27, 2013	71.15
MSCI Emerging Markets Provisional Climate Change EU Climate Transition Index	MSCI Emerging Markets	November 27, 2013	108.39
MSCI USA Provisional Climate Change EU Climate Transition Index	MSCI USA	November 27, 2013	62.28
MSCI Europe Provisional Climate Change EU Climate Transition Index	MSCI Europe	November 27, 2013	82.88
MSCI EMU Provisional Climate Change EU Climate Transition Index	MSCI EMU	November 27, 2013	122.19
MSCI Japan Provisional Climate Change EU Climate Transition Index	MSCI Japan	November 27, 2013	88.34
MSCI ACWI Provisional Climate Change EU Paris-Aligned Index	MSCI ACWI	November 27, 2013	65.84
MSCI World Provisional Climate Change EU Paris-Aligned Index	MSCI World	November 27, 2013	60.99
MSCI Emerging Markets Provisional Climate Change EU Paris-Aligned Index	MSCI Emerging Markets	November 27, 2013	99.26
MSCI Europe Provisional Climate Change EU Paris-Aligned Index	MSCI Europe	November 27, 2013	66.96

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Appendix IV: Iterative Down Weighting Process

The iterative down weighting process is applied on the securities of the Final Universe with the objective of meeting all the minimum requirements of the EU CTBs or EU PABs as recommended in the TEG Final Report.

The minimum requirements for the Provisional Indexes are detailed in Table 1 and Table 2 respectively.

ITERATIVE DOWNWEIGHTING

Starting with the Final Universe, an iterative down weighting process is applied in order to meet with the minimum requirements for the Provisional Indexes. The iterative down weighting stops when all the requirements defined in above are met. The steps followed in the iterative downweighting (Exhibit 2) are outlined below:

Step 1. Check whether all targets for the Provisional Index are met. If all targets are met, then no downweighting is required.

Step 2. Stocks in the Asset Stranding, Product Transition and Operational Transition LCT Category in the Final Universe are sorted in ascending order of LCT Score.

Step 3. If any of the targets are not met, the highest ranked stock in the sorted list in Step 2 is selected for downweighting[12] and the weight is reduced by 25% of its weight in the Final Universe.

Step 4. If the targets are still not met, the stock is downweighted in steps of 25% of its weight in the Final Universe till a maximum downweighting of 75%.

Step 5. Stocks of the Final Universe in the Solutions and Neutral LCT Category, belonging to the same "Climate Impact Sector" as the stock being downweighted are proportionally upweighted[13] to ensure that the overall allocation to the High Climate Impact Sector is the same as that in the Parent Index and the sum of the weights of all constituents is 1.

[12] In case downweighting is required to meet the targets on Scope 1+2 Emissions Intensity, either reduction relative to Parent Index or annual decarbonization, then stocks in the top quartile on Emissions Intensity in the Parent Index are excluded from the downweighting process. This ensures that stocks with low LCT Score and low Emissions Intensity are not downweighted.

[13] In case downweighting is required to meet the targets on Scope 1+2 Emissions Intensity, either reduction relative to Parent Index or annual decarbonization, then stocks in the bottom quartile on Emissions Intensity in the Parent Index are excluded from the upweighting process. This ensures that stocks in the Solutions and Neutral LCT Category, but high Emissions Intensity are not upweighted.

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Step 6. If the targets are still not met, the next stock with the lowest LCT Score is selected and Steps 3-5 are repeated.

Step 7. If the targets are still not met and all stocks of the Final Universe belonging to the Asset Stranding, Product Transition and Operational Transition LCT Categories are downweighted by 75% of the weight in the Final Universe, Steps 3-6 are repeated, with a maximum downweighting of 90% in a single downweighting step of 15 percentage points of the weight in the Final Universe.

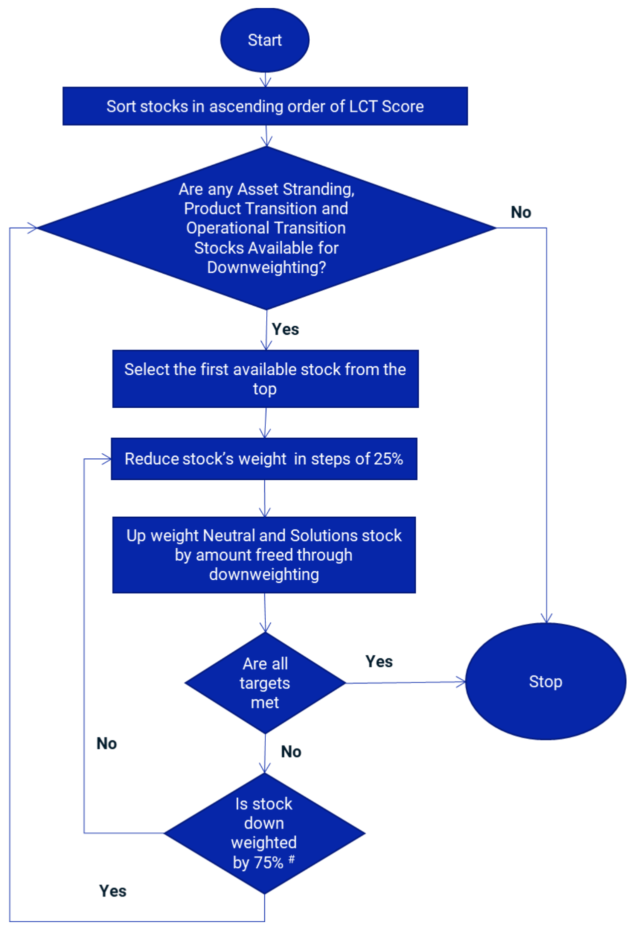

Exhibit 2: Schematic Representation of the Iterative Downweighting Process

If all Asset Stranding, Product Transition and Operational Transition stocks are downweighted by 75% and the targets are not met, the maximum downweighting is relaxed to 90% in a single downweighting step of 15 percentage points of the weight in the Final Universe.

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