RESEARCH INSIGHTS
MSCI SUSTAINABILITY AND CLIMATE

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MSCI Fund ESG Ratings, Fund ITR, Fund LCT and Fund Energy Transition Methodology

Contents

1 Overview of MSCI Sustainability & Climate Fund Metrics and fund S&C ratings

This document details MSCI Sustainability & Climate's (MSCI S&C'S)[1] Fund Metrics (S&C Fund Metrics) methodology, which includes the Fund ESG Rating methodology and the related methodologies of three other S&C ratings that are also based on a defined ranking system of rating categories of funds: the Fund Energy Transition Score, Fund Implied Temperature Rise Band, and Fund Low Carbon Transition Score. They each aim to provide fund-level transparency to help investors better understand the ESG characteristics of a fund and screen funds based on a diverse set of ESG exposure categories. S&C Fund Metrics also consists of thousands of metrics that are processed data and absolute measures and estimates across a broad variety of sustainability and climate themes, in addition to the four methodologies disclosed in this document that are S&C Ratings. Each of the four fund S&C ratings' methodologies is disclosed in a separate section below.

[1] MSCI Sustainability & Climate products and services are provided by MSCI Solutions LLC in the United States, MSCI Solutions (UK) Limited in the United Kingdom and certain other related entities.

2 Fund ESG Rating

2.1 Objective

The Fund ESG Rating is designed to assess the resilience of a fund's aggregate holdings to long-term, financially relevant, ESG risks and opportunities. It is assessed on a seven-point letter rating scale from CCC to AAA, with CCC and AAA being the lowest and highest possible fund values, respectively. Highly rated funds consist of holdings from issuers with leading management of key ESG risks.

Exhibit 1: Fund ESG Rating scale

AAA	Funds rated AAA have the highest ESG Rating assigned by MSCI S&C. AAA-rated funds have holdings that are rated AAA, on average. Holdings rated AAA have the strongest management measures relative to their aggregate ESG risks and opportunities, in comparison to global peers. The fund may include holdings that are rated lower than AAA.
AA	AA-rated funds have investments that are rated AA, on average. Holdings rated AA have very strong management measures relative to their aggregate ESG risks and opportunities, in comparison to global peers. The fund may include holdings that are rated higher or lower than AA.
A	A-rated funds have holdings that are rated A, on average. Holdings rated A have strong management measures relative to their aggregate ESG risks and opportunities, in comparison to global peers. The fund may include holdings that are rated higher or lower than A.
BBB	BBB-rated funds have holdings that are rated BBB, on average. Holdings rated BBB have moderate management measures relative to their aggregate ESG risks and opportunities, in comparison to global peers. The fund may include holdings that are rated higher or lower than BBB.
BB	BB-rated funds have holdings that are rated BB, on average. Holdings rated BB have weak management measures relative to their aggregate ESG risks and opportunities, in comparison to global peers. The fund may include holdings that are rated higher or lower than BB.
B	B-rated funds have holdings that are rated B, on average. Holdings rated B have poor management measures relative to their aggregate ESG risks and opportunities, in comparison to global peers. The fund may include holdings that are rated higher or lower than B.
CCC	Funds rated CCC have the lowest ESG Rating assigned by MSCI S&C. CCC-rated funds have holdings that are rated CCC, on average. Holdings rated CCC have very poor

	management measures relative to their aggregate ESG risks and opportunities, in comparison to global peers. The fund may include holdings that are rated higher than CCC.

Exhibit 2: Fund ESG Leader, Average, and Fund ESG Laggard Categorizations

Fund ESG Leader	Companies rated AAA or AA.
Average	Companies rated A, BBB or BB.
Fund ESG Laggard	Companies rated B or CCC.

The Fund ESG Rating is derived from the Fund ESG Quality Score, assessed on a rating scale from 0 to 10, with 0 and 10 being the lowest and highest possible fund values, respectively.

2.2 Methodological steps for calculating the Fund ESG Rating

2.2.1 Fund ESG Quality Score calculation

The Fund ESG Quality Score is an absolute 0-10 score calculated using the following steps:

Step 1: Rescale fund holding weights to account for ESG coverage

Fund holding weights are typically available based on the total fund value, but the weights used to calculate the Fund ESG Quality Score need to be adjusted for differences in ESG coverage as follows:

1. Start with holding weights disclosed by the fund (w_d).
2. Recalculate holding weights after removing all short positions (w_s).
3. Remove all securities that do not have an Overall ESG Score (w_c). Estimates are not made in the case of missing scores.
4. Rebase the remaining weights to add up to 100% (w_r).

Exhibit 3: Example of rescaled fund holding weights that account for ESG coverage

Holding	Asset Class	Overall ESG Score	Weight (w_d)	Weight Excluding Short Positions (w_s)	Weight Excluding Uncovered Holdings (w_r)
Corporate 1	Equity	5.8	36.4%	26.7%	33.3%

Corporate 2	Equity	8.5	-36.4%		
Corporate 3	Bond	2.2	36.4%	26.7%	33.3%
Corporate 4	Equity	Not rated	18.2%	13.3%	
Sovereign 1	Bond	5	36.4%	26.7%	33.3%
Cash	Cash	Not rated	9.1%	6.7%	
Fund			**100%**	**100%**	100%

Source: MSCI S&C.

Step 2: Calculate the Fund ESG Quality Score

The Fund ESG Quality Score is calculated as the weighted average of Overall ESG Scores of a fund's underlying holdings using the rebased weights calculated in Step 1.

$$Fund\ ESG\ \mathrm{Quality}\ Score = \sum_{i=1}^{n} (ESG_i) \times (w_{i,r})$$

Where:

$Fund\ ESG\ \mathrm{Quality}\ Score$ is the Fund ESG Quality Score.

ESG_i is the Overall ESG Score of holding i.

$w_{i,r}$ is the rebased weight of holding i.

The Overall ESG Score of a security held by a fund is assessed by taking either the Final Industry-Adjusted Company Score (for a company) or the Government Adjusted ESG Score (for a country) of the issuer. The methodologies used to determine issuer-level scores for companies and countries are described in "MSCI ESG Ratings Methodology" and "MSCI ESG Government Ratings Methodology," respectively.

Exhibit 4: Example showing calculation of Fund ESG Quality Score

Holding	Asset Class	Overall ESG Score	Weight Excluding Uncovered Holdings (w_r)	ESG_i x ($w_{i,r}$)
Corporate 1	Equity	5.8	33.3%	1.93
Corporate 2	Equity	8.5		
Corporate 3	Bond	2.2	33.3%	0.73
Corporate 4	Equity	Not rated		
Sovereign 1	Bond	5	33.3%	1.67
Cash	Cash	Not rated		

Fund ESG Quality Score:	**4.33**

Source: MSCI S&C.

2.2.2 Fund ESG Rating calculation

The Fund ESG Rating is calculated as a direct mapping of the 0-10 Fund ESG Quality Score to the letter rating categories of the Fund ESG Rating. The 0 to 10 scale is divided into seven equal parts, each corresponding to a Fund ESG Rating letter rating. Every possible Fund ESG Quality Score falls within the range of only one letter rating.

Exhibit 5: Mapping of Fund ESG Quality Scores to Fund ESG Ratings

Fund ESG Quality Score	Fund ESG Rating
8.571-10.0*	AAA
7.143-8.571	AA
5.714-7.143	A
4.286-5.714	BBB
2.857-4.286	BB
1.429-2.857	B
0.0-1.429	CCC

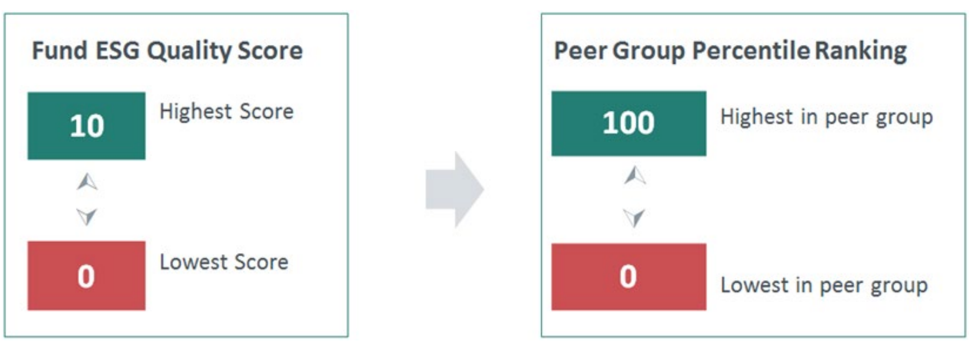
Source: MSCI S&C. * Appearance of overlap in the score ranges is due to rounding.

2.3 Methodology for calculating fund peer group and global percentiles

2.3.1 Peer Group Percentiles

Each fund's ESG Quality Score is also presented as a percentile ranking in the fund's peer group. The Fund ESG Quality Score – Peer Percentile metric represents the percentage of funds in a fund's peer group with an ESG Quality Score equal to, or lower than, the fund's ESG Quality Score.

Exhibit 6: ESG Quality Score and Fund ESG Quality Score – Peer Percentile



The peer groups are defined using the Lipper Global Classification. The following criteria must be met for a fund to receive a Fund ESG Quality Score – Peer Percentile assessment:

1. The fund must be in the standard S&C Fund Metrics coverage universe (see Section 6.1)
2. The fund must be categorized by the Lipper Global Classification scheme.
3. The peer group must contain at least 30 funds.
4. The standard deviation of the Fund ESG Quality Score within the peer group must be greater than, or equal to, 0.1.

The Fund ESG Quality Score – Peer Percentile is used to derive the MSCI ESG Fund Quality Badge – Top 10% Peer Rank and Top 20% Peer Rank. To qualify for the Top 10% Peer Rank badge, a fund must rank at the 90th percentile or higher within its peer group and at the 50th percentile or higher globally (see section 2.3.2); for the Top 20% Peer Rank badge, a fund must rank at the 80th percentile or higher within its peer group and at the 50th percentile or higher globally.

2.3.2 Global percentiles

MSCI S&C assigns a Fund ESG Quality Score – Global Percentile to every fund in the Standard Fund Metrics coverage universe (See Section 6.1). This metric denotes the percentage of funds covered by S&C Fund Metrics with a score equal to or lower than, a fund's ESG Quality Score. Considered together, the Fund ESG Quality Score – Global Percentile and Fund ESG Quality Score – Peer Percentile indicate the position of a fund from both an absolute (MSCI Fund Ratings universe-wide) and relative (within the peer group) perspective.

The Fund ESG Quality Score – Global Percentile is used to derive the MSCI ESG Fund Quality Badge – Top 10% Global Rank and Top 20% Global Rank. To qualify for the Top 10% Global Rank badge, a fund must rank at the 90th percentile or higher globally (see section 2.3.2); for the top 20% Global Rank badge, a fund must rank at the 80th percentile or higher globally.

2.4 Fund ESG Rating Model Update History

Version	Changes	Date
V1.0	Launch of Fund ESG Rating and Fund ESG Quality Score	April 17, 2019
V2.0	The Adjustment Factor(s) was removed from the calculation of the Fund ESG Quality Score. The Fund ESG Quality Score was made to equal the Fund Weighted Average ESG Score.	April 24, 2023

3 Fund Energy Transition Score

3.1 Objective

The Fund Energy Transition Score is designed to assess the readiness of a fund's aggregate holdings to manage the risks and capitalize on the opportunities of the energy transition. It is expressed as a 0-10 score, with 10 indicating the highest level of transition readiness relative to transition pressure.

For additional details on MSCI Energy Transition Scores of company issuers, refer to "Energy Transition Framework Methodology."

3.2 Methodological steps for calculating Fund Energy Transition Score

3.2.1 Fund Energy Transition Score calculation

The Fund Energy Transition Score is an absolute 0-10 score calculated using the following steps:

Step 1: Rescale fund holding weights to account for Energy transition coverage

Fund holding weights are typically available based on the total fund value, but the weights used to calculate the Fund Energy Transition Score need to be adjusted for differences in Energy Transition coverage as follows:

1. Start with holding weights disclosed by the fund (w_d).
2. Recalculate holding weights after removing all short positions (w_s).
3. Remove all securities that do not have an Energy Transition Score (w_c). Estimates are not made in the case of missing scores.
4. Rebase the remaining weights to add up to 100% (w_r).

Exhibit 7: Example of rescaled fund holding weights that account for Energy Transition coverage

Holding	Asset Class	Energy transition score	Weight (w_d)	Weight Excluding Short Positions (w_s)	Weight Excluding Uncovered Holdings (w_r)
Corporate 1	Equity	6.4	40.0%	32.0%	40.0%
Corporate 2	Equity	7.5	-25.0%		
Corporate 3	Bond	3.0	40.0%	32.0%	40.0%
Corporate 4	Equity	7.2	20.0%	16.0%	20.0%
Sovereign 1	Bond	Not rated	20.0%	16.0%	

Cash	Cash	Not rated	5.0%	4.0%	
Fund			**100%**	**100%**	**100%**

Source: MSCI S&C

Step 2: Calculate the Fund Energy Transition Score

The Fund Energy Transition Score is calculated as the weighted average of Energy transition scores of a fund's underlying holdings using the rebased weights calculated in Step 1.

$$Fund\ Energy\ Transition\ Score = \sum_{i=1}^{n} (ETS_i)\ \times (w_{i,r})$$

Where:

$Fund\ Energy\ Transition\ Score$ is the Fund Energy Transition Score.

ETS_i is the Energy transition score of holding i.

$w_{i,r}$ is the rebased weight of holding i.

The methodologies used to determine Energy Transition Scores for companies are described in "Energy Transition Framework Methodology."

Exhibit 8: Example showing calculation of Fund Energy Transition Score

Holding	Asset Class	Energy transition score	Weight Excluding Uncovered Holdings (w_r)	ETS_i x ($w_{i,r}$)
Corporate 1	Equity	6.4	40.0%	2.56
Corporate 2	Equity	7.5		
Corporate 3	Bond	3.0	40.0%	1.20
Corporate 4	Equity	7.2	20.0%	1.44
Sovereign 1	Bond	Not rated		
Cash	Cash	Not rated		
Fund Energy Transition Score:				**5.20**

Source: MSCI S&C.

3.3 Fund Energy Transition Score Model Update History

Version	Changes	Date
V1.0	Launch of Fund Energy Transition Score	December 11, 2025

4 Fund Implied Temperature Rise

4.1 Objective

The Fund Implied Temperature Rise Band is designed to assess a fund's alignment with the Paris Agreement temperature goals. It is assessed on a four-category scale; 1.5°C Aligned, 2°C Aligned, Misaligned, and Strongly Misaligned.

Exhibit 9: Fund Implied Temperature Rise Band descriptions

1.5°C Aligned	The fund aligns with the Paris Agreement's maximal objective of limiting the global mean temperature rise to 1.5°C compared with preindustrial levels. It is a transition leader, significantly contributing to mitigating catastrophic climate change.
2°C Aligned	The fund aligns with the Paris Agreement's minimum objective of limiting the global mean temperature rise to 2°C compared with preindustrial levels. It is engaged in the low-carbon transition.
Misaligned	The fund does not align with the Paris Agreement goals. Its pace of decarbonization is too slow to mitigate catastrophic climate change. The implied temperature rise falls between 2°C and 3.2°C.
Strongly Misaligned	The fund is misaligned even by business-as-usual standards. Funds that are Strongly Misaligned have an implied temperature rise that is greater than 3.2°C.

The Fund Implied Temperature Rise Band is derived from MSCI S&C's issuer-level Fund Implied Temperature Rise, assessed on an absolute scale from a 1.3°C to 10°C. MSCI S&C's fund-level aggregation approach follows the recommendations of the Task Force on Climate-related Financial Disclosures' (TCFD's) Portfolio Alignment Team, using an "aggregated budget" approach. Under this approach, a company's carbon budget overshoot occurs where its cumulative projected emissions exceed its cumulative Net Zero 2050 carbon budget, while an undershoot occurs where its projected emissions fall below that budget.

For additional details on MSCI S&C's Implied Temperature Rise assessment of company issuers, refer to "MSCI Implied Temperature Rise Methodology." For additional details on MSCI S&C's Implied Temperature Rise assessment of sovereign issuers, refer to "Country Scope 1 Emissions Implied Temperature Rise Methodology."

4.2 Methodological steps for calculating Fund Implied Temperature Rise

4.2.1 Fund Implied Temperature Rise calculation

The Fund Implied Temperature Rise is an absolute 1.3°C to 10°C assessment calculated using the following steps:

Step 1: Rescale fund holding weights to account for Implied Temperature Rise coverage

Calculating the Fund Implied Temperature Rise Band requires calculating the Fund Implied Temperature Rise as an intermediate step. Fund holding weights are typically available based on the total fund value, but the weights used to calculate the Fund Implied Temperature Rise need to be adjusted for differences in Implied Temperature Rise coverage as follows:

1. Start with holding weights disclosed by the fund (w_d).
2. Recalculate holding weights after removing all short positions (w_s).
3. Remove all securities that do not have values for all datapoints required for calculation (w_c). Estimates are not made in the case of missing data.
4. Rebase the remaining weights to add up to 100% (w_r).

Exhibit 10: Example of rescaled fund holding weights that account for Implied Temperature Rise coverage

Holding	Asset Class	Enterprise Value Including Cash [USD million]	Cumulative Net Zero 2050 Carbon Budget (Scope 1, 2 and 3) [tCO2e]	Absolute Carbon Budget Overshoot [tCO2e]	PPP-adjusted GDP (USD million) [Most Recent]	Cumulative Net Zero 2050 Carbon Budget [Scope 1] - Blended budget [tCO2e]	Absolute Carbon Budget [Scope 1] Overshoot [Blended budget, Adjusted Targets-at-Face-Value trajectory] [tCO2e]	Weight (wd)	Weight Excluding Short Positions (ws)	Weight Excluding Uncovered Holdings (wc)
Corporate 1	Equity	500	6,000	45,000				25.0%	20.0%	33.3%
Corporate 2	Equity	40,000	480,000,000	65,000,000				-25.0%		
Corporate 3	Bond	3,500,000	1,300,000,000	500,000,000				25.0%	20.0%	33.3%
Corporate 4	Bond							25.0%	20.0%	
Sovereign 1	Bond				2,500,000	1,600,000,000	6,700,000,000	25.0%	20.0%	33.3%
Cash	Cash							25.0%	20.0%	
Fund								100.0%	100%	100%

Source: MSCI S&C

Step 2: Calculate position-level Ownership

This approach aggregates all issuers' projected emissions and carbon budgets using an attribution factor based on the Partnership for Carbon Accounting Financials (PCAF) framework. According to the framework, if a fund finances, e.g., 5% of a company's enterprise value including cash (EVIC), it "owns" (i.e., finances) 5% of this company's projected emissions and 5% of this company's carbon budget — and therefore, 5% of this company's over- or undershoot.

The ownership for the emissions and carbon budget of each issuer, per million USD invested in a fund, is defined using the following calculation:

For corporates:

$$Ownership(\%)_{security} = \frac{Weight_{security}}{Enterprise\ Value\ Including\ Cash(million\ USD)_{corporate}}$$

For sovereigns:

$$Ownership(\%)_{security} = \frac{Weight_{security}}{PPP - adjusted\ GDP(million\ USD)_{sovereign}}$$

Step 3: Calculate the Fund cumulative Net Zero 2050 carbon budget (corporate Scope 1, 2 and 3 and sovereign Scope 1) [tCO2e]

The Fund cumulative Net Zero 2050 carbon budget (corporate Scope 1, 2 and 3 and sovereign Scope 1) [tCO2e] is the sum of financed cumulative Net Zero 2050 carbon budgets for the fund's underlying holdings, per million USD invested in the fund. This represents the total greenhouse gas emissions (corporate Scope 1, 2 and 3 and sovereign Scope 1) remaining to stay within a global warming limit of 1.55 °C.[2]

Exhibit 11: Example of Fund cumulative Net Zero 2050 carbon budget (corporate Scope 1, 2 and 3 and sovereign Scope 1) [tCO2e]

Holding	Asset Class	Ownership	Cumulative Net Zero 2050 Carbon Budget (Scope 1, 2 and 3) [tCO2e]	Cumulative Net Zero 2050 Carbon Budget [Scope 1] - Blended budget [tCO2e]	Financed Budget
Corporate 1	Equity	0.066600%	6,000		4
Corporate 2	Equity				
Corporate 3	Bond	0.000010%	1,300,000,000		130
Corporate 4	Bond				
Sovereign 1	Bond	0.000013%		1,600,000,000	208
Cash	Cash				
Fund					342

Step 4: Calculate the Fund absolute carbon budget overshoot x remaining global Net Zero 2050 carbon budget x TCRE factor

The Fund absolute carbon budget overshoot x remaining global Net Zero 2050 carbon budget x TCRE factor is an intermediate value required to ensure that issuer-level Implied Temperature Rises

[2] The Base Temperature of the Reference Scenario of 1.55 °C used in this calculation describes the degrees Celsius global mean average surface warming (in the year 2100 or later) according to the NGFS reference scenario used in the Implied Temperature Rise model; it is an input to this model. It should not be confused with the Paris Agreement's maximal objective of limiting the global mean temperature rise to 1.5°C compared with preindustrial levels, which is the basis of the Fund Implied Temperature Rise Bands, which is an output of this of this model

with different year references can be aggregated to a Fund Implied Temperature Rise. The remaining global Net Zero 2050 carbon budget [GtCO2e] differs for different year references and therefore needs to be multiplied with the financed absolute carbon budget overshoot and science-based ratio approach of Transient Climate Response to Cumulative Carbon Emissions (TCRE) of each position prior to aggregation.

Exhibit 12: Example of Fund absolute carbon budget overshoot x remaining global Net Zero 2050 carbon budget x TCRE factor

Holding	Asset Class	Ownership	Absolute Carbon Budget Overshoot [tCO2e]	Absolute Carbon Budget [Scope 1] Overshoot [Blended budget, Adjusted Targets-at-Face-Value trajectory] [tCO2e]	Financed Overshoot [tCO2e]	TCRE Factor [°C/GtCO2e]	*Remaining Global Net Zero 2050 Carbon Budget [GtCO2e]*	Financed Overshoot_i x TCRE x Global Budget
Corporate 1	Equity	0.066600%	45,000		30	0.00045	1004.1	14
Corporate 2	Equity							
Corporate 3	Bond	0.000010%	500,000,000		50	0.00045	947	21
Corporate 4	Bond							
Sovereign 1	Bond	0.000013%		6,700,000,000	871	0.00045	947	371
Cash	Cash							
Fund								406

Step 5: Calculate the Fund Implied Temperature Rise

In fund aggregation, the contribution of each fund holding i is calculated based on the reference year of the holding's budget. The Fund Implied Temperature Rise is calculated with this formula:

$$Portfolio\ Implied\ Temperature\ Rise = Base\ Temperature + \frac{\sum\left(w_{i,r} * TCRE * Global\ Budget_{reference\ year,i} * Financed\ Overshoot_i\right)_i}{\sum\left(w_{i,r} * Financed\ Budgets_i\right)}$$

Where:

- $Base\ Temperature$ is the Fund base temperature of the reference scenario [1.55 °C].
- $\sum\left(w_{i,r} * TCRE * Global\ Budget_{reference\ year,i} * Financed\ Overshoot_i\right)_i$ is the Fund absolute carbon budget overshoot x remaining global Net Zero 2050 carbon budget x TCRE factor
- $w_{i,r}$ is the rebased weight of holding i.
- $\sum(w_{i,r} * Financed\ Budgets_i)$ is the Fund cumulative Net Zero 2050 carbon budget (corporate Scope 1, 2 and 3 and sovereign Scope 1) [tCO2e]

4.2.2 Fund Implied Temperature Rise Band Calculation

The Fund Implied Temperature Rise Band is calculated as a direct mapping of the 1.3°C to 10°C Fund Implied Temperature Rise to alignment categories.

Exhibit 13: Mapping of Fund Implied Temperature Rise to Fund Implied Temperature Rise Band

Fund Implied Temperature Rise	Fund Implied Temperature Rise Band
<=1.5	1.5°C Aligned
>1.5 to 2.0	2°C Aligned
>2.0 to 3.2	Misaligned
>3.2	Strongly Misaligned

4.3 Fund Implied Temperature Rise Model Update History

Version	Changes	Date
V1.0	Launch of Fund Implied Temperature Rise	September 30, 2021
V1.1	Fund Implied Temperature Rise revised to use Global Carbon Budgets that correspond with the ITR reference year of each holding.	February 14, 2024
V1.2	Fund Implied Temperature Rise revised to include sovereign holdings in coverage.	December 11, 2025

5 Fund Low Carbon Transition Score

5.1 Objective

The Fund Low Carbon Transition Score is designed to assess the exposure of a fund's aggregate holdings to risks and opportunities related to the low carbon transition based on the carbon-intensive nature of their business lines. It is expressed as an absolute 0-10 score, with 10 indicating the highest level of alignment to Low Carbon Transition.

For additional details on MSCI Low Carbon Transition of company issuers, refer to "Low Carbon Transition Risk Assessment."

5.2 Methodological steps for calculating the Fund Low Carbon Transition Score

5.2.1 Fund Low Carbon Transition Score calculation

The Fund Low Carbon Transition Score is an absolute 0-10 score calculated using the following steps:

Step 1: Rescale fund holding weights to account for Low Carbon Transition coverage

Fund holding weights are typically available based on the total fund value, but the weights used to calculate the Fund Low Carbon Transition Score need to be adjusted for differences in Low Carbon Transition coverage as follows:

1. Start with holding weights disclosed by the fund (w_d).
2. Recalculate holding weights after removing all short positions (w_s).
3. Remove all securities that do not have a Low Carbon Transition Score (w_c). Estimates are not made in the case of missing scores.
4. Rebase the remaining weights to add up to 100% (w_r).

Exhibit 14: Example of rescaled fund holding weights that account for Low Carbon Transition coverage

Holding	Asset Class	Low Carbon Transition Score	Weight (w_d)	Weight Excluding Short Positions (w_s)	Weight Excluding Uncovered Holdings (w_c)	Weight Rebased to 100% (w_r)
Corporate 1	Equity	8.0	45.0%	36.0%	36.0%	50.0%
Corporate 2	Equity	6.4	-25.0%			
Corporate 3	Bond	4.2	45.0%	36.0%	36.0%	50.0%
Corporate 4	Equity	Not rated	15.0%	12.0%		
Sovereign 1	Bond	Not rated	15.0%	12.0%		

Cash	Cash	Not rated	5.0%	4.0%		
Fund			**100%**	**100%**	**72%**	**100%**

Source: MSCI S&C

Step 2: Calculate the Fund Low Carbon Transition Score

The Fund Low Carbon Transition Score is calculated as the weighted average of Low Carbon Transition Scores of a fund's underlying holdings using the rebased weights calculated in Step 1.

$$Fund\ Low\ Carbon\ Transition\ Score = \sum_{i=1}^{n} (LCT_i)\ \times (w_{i,r})$$

Where:

$Fund\ Low\ Carbon\ Transition\ Score$ is the Fund Low Carbon Transition Score.

LCT_i is the Low Carbon Transition Score of holding i.

$w_{i,r}$ is the rebased weight of holding i.

The methodologies used to determine Low Carbon Transition Scores for companies are described in "Low Carbon Transition Risk Assessment Methodology."

Exhibit 15: Example showing calculation of Fund Low Carbon Transition Score

Holding	Asset Class	Low Carbon Transition Score	Weight Rebased to 100% (w_r)	LCT_i x ($w_{i,r}$)
Corporate 1	Equity	8.0	50.0%	4.00
Corporate 2	Equity	6.4		
Corporate 3	Bond	4.2	50.0%	2.10
Corporate 4	Equity	Not rated		
Sovereign 1	Bond	Not rated		
Cash	Cash	Not rated		
Fund Low Carbon Transition Score:				**6.10**

Source: MSCI S&C

5.3 Fund Low Carbon Transition Score Model Update History

Version	Changes	Date
V1.0	Launch of Fund Low Carbon Transition Score	April 1, 2021

6 MSCI Sustainability & Climate Fund Metrics inclusion criteria

6.1 Standard coverage universe inclusion criteria

S&C Fund Metrics holdings data is sourced from Lipper. To be included in the standard S&C Fund Metrics coverage universe, a fund must meet the following four criteria:

1. For funds with a fund asset class other than bond or money market, at least 65% of the fund's gross weight must come from securities covered by MSCI ESG Ratings. For funds with a fund asset class of bond or money market, at least 50% of the fund's gross weight must come from securities covered by MSCI ESG Ratings. The S&C Fund Metrics methodology imposes a lower coverage threshold on bond and money market funds because they generally have higher exposure to asset classes that are currently out of scope for ESG analysis, including asset-backed securities, mortgage-backed securities, and municipal bonds. The coverage criterion does not apply to funds that are part of the underlying holdings of another fund.
    a. Cash positions and other asset types not relevant for ESG analysis are removed prior to calculating a fund's gross weight. See Appendix 2 for a full listing of excluded asset types.
    b. The absolute values of short positions are included in a fund's gross weight calculation but are treated as uncovered for ESG data purposes.
    c. The security asset type must allow recourse to the rated issuer. See Appendix 1 for a list of eligible asset types.
2. The fund holdings date (the latest date that fund reported its holdings) must be no more than 1 year old.
3. The fund must have at least 10 securities, including look through of held funds.
4. The fund must not be in the commodity asset class.
5. Funds that fail to pass the coverage threshold requirement defined in section 6.1, but pass the other requirements, may still qualify for inclusion if they meet the buffer coverage requirements defined in section 6.2.

6.2 Buffer coverage inclusion criteria

Buffer coverage inclusion criteria are used to help maintain stability of the S&C Fund Metrics Standard Universe. Funds that meet all four of the following criteria will qualify to be included in the standard coverage universe:

1. Lower coverage threshold: Alternatives, Equity, Mixed Assets, Other, and Real Estate funds will stay in the standard coverage universe if they have at least 60% ESG Ratings coverage. Bond and Money Market funds will stay in coverage if they have at least 45% ESG Ratings coverage.

2. Three-month grace period: A fund can stay in the buffer range for a maximum of three contiguous months.
3. Three-month lookback eligibility: A fund must have met the standard coverage criteria at least once in the previous three months.
4. One-month lookback floor: A fund cannot have dropped below the buffer coverage threshold in the previous month.

6.3 Expanded coverage universe

Fund ESG Ratings and other fund-level metrics are still calculated for funds that fail to qualify for inclusion in the standard coverage universe, as long as they pass the following four criterion.

1. The fund's gross weight of securities in ESG Ratings coverage must exceed 0%.
2. The fund holdings date (the latest date that fund reported its holdings) must be no more than 1 year old.
3. The fund must have at least 1 security.
4. The fund must not be in the commodity asset class.

Funds that qualify for inclusion in the expanded universe, but not the standard universe, have certain restrictions. They are not considered in global and peer percentile calculations of other funds, they do not receive global and peer percentile assessments, and S&C Fund Metrics reports are not issued for them. As with any fund, fund metrics are only based on covered holdings.

6.4 Rating-specific coverage criteria

The rules described above determine which funds are included in the product-level S&C Fund Metrics standard and expanded universes. The bullets below note additional criteria that must be met to receive each specific rating.

- Fund ESG Rating – No additional criteria. All funds in either the standard or expanded universe have a Fund ESG Rating.
- Fund Energy Transition Score - The fund's gross weight of securities in Energy Transition coverage must exceed 0%.
- Fund Implied Temperature Rise Band – The fund's gross weight of securities in Implied Temperature Rise coverage must exceed 0%.
- Fund Low Carbon Transition Score - The fund's gross weight of securities in Low Carbon Transition coverage must exceed 0%.

7 Methodology for calculating Fund ESG Coverage (%) vs Fund ESG Coverage Overall (%)

S&C Fund Metrics includes two distinct coverage metrics: Fund ESG Coverage (%) and Fund ESG Coverage Overall (%). The Fund ESG Coverage (%) metric is used exclusively for determining S&C Fund Metrics eligibility.

7.1 Fund ESG Coverage (%)

Cash is excluded to avoid punishing funds for holding an asset type that is outside of ESG relevancy. Including cash would decrease the coverage percentage and could keep a fund out of S&C Fund Metrics. The absolute value of short positions is included so that coverage is not overstated. That is, it would be misleading to state that 100% of a fund is covered if there is a short component not considered in the assessment.

The example below shows the calculation for the Fund ESG Coverage (%) of a fund.

1. Start with holding weights disclosed by the fund (w_d).
2. Exclude cash.
3. Convert short and long holding weights to gross weights (w_g).
4. Rebase the remaining weights to add up to 100% (w_r).
5. Sum the weights of all securities that have coverage that are not short positions ($w_{s,c}$).

Exhibit 16: Example showing calculation of Fund ESG Coverage (%)

Holding	Overall ESG Rating	Weight (w_d)	Exclude Cash	Gross Weight (w_g)	Weight Rebased to 100% (w_r)	Weight Excluding Short and Uncovered Holdings ($w_{s,c}$)
Corporate 1	A	36.4%	36.4%	36.4%	22.2%	22.2%
Corporate 2	AA	-36.4%	-36.4%	36.4%	22.2%	
Corporate 3	B	36.4%	36.4%	36.4%	22.2%	22.2%
Sovereign 1	BBB	36.4%	36.4%	36.4%	22.2%	22.2%
Corporate 4	Uncovered	18.2%	18.2%	18.2%	11.1%	
Cash	Uncovered	9.1%				
Fund ESG Coverage (%):						**66.6%**

Source: MSCI S&C.

7.2 Fund ESG Coverage Overall (%)

A separate Fund ESG Coverage Overall (%) metric is calculated to measure exposure to MSCI ESG Ratings.

Cash is included to avoid overstating exposure to specific metrics. For example, if cash were excluded, and weights were then normalized to 100%, exposure to CCC rated companies would be overstated.

Short positions, however, are excluded because different use cases suggest different treatment. Exclusion ensures a clear and consistent methodology.

The example below shows the calculation for the Fund ESG Coverage Overall (%) of a fund.

1. Start with holding weights disclosed by the fund (w_d).
2. Recalculate holding weights after removing all short positions (w_s).
3. Rebase the remaining weights to add up to 100% (w_r).
4. Remove all securities that do not have coverage (w_c).

Sum the weights of all securities that have coverage (w_c).

Exhibit 17: Example showing calculation of Fund ESG Coverage Overall (%)

Holding	Overall ESG Rating	Weight (w_d)	Weight Excluding Short Positions (w_s)	Weight Rebased to 100% (w_r)	Weight Excluding Uncovered Holdings (w_c)
Corporate 1	A	36.4%	36.4%	26.7%	26.7%
Corporate 2	AA	-36.4%			
Corporate 3	B	36.4%	36.4%	26.7%	26.7%
Sovereign 1	BBB	36.4%	36.4%	26.7%	26.7%
Corporate 4	Uncovered	18.2%	18.2%	8.2%	
Cash	Uncovered	9.1%	9.1%	6.7%	
Fund ESG Coverage Overall (%):					**80%**

Source: MSCI S&C.

8 Treatment of cash

Cash holdings (and other asset types listed in Appendix 2) are excluded prior to calculating Fund ESG Coverage (%). Cash is removed because it is outside the scope of ESG relevancy. Including it in the coverage figure would lead to the undesired result of funds failing to meet the coverage threshold due to cash allocations.

The weight of cash is included in all metrics that measure exposure to specific criteria (e.g., tobacco, fossil fuel reserves, ESG laggards, etc.). Excluding cash from exposure metrics would generate overstated results.

9 Treatment of short positions

When calculating Fund ESG Coverage (%), short positions are always treated as uncovered, even if they are held as securities of issuers within the scope of MSCI ESG coverage. By including the absolute value of short positions in the uncovered portion of a fund, the coverage percentage will not overstate ESG coverage.

Although short positions are included in the gross value when calculating coverage, they are removed prior to calculating the rest of the S&C Fund Metrics results. This is because the interpretation of short positions, from an ESG perspective, varies widely based on the use case and the specific metric being considered.

10 Treatment of funds of funds

Funds that are held by a fund of funds are eligible to be included in the ESG assessment of the fund of funds. To qualify for inclusion, the held fund must have at least 1 security, and the holdings date must be less than one year old, and the fund must not be in the commodity asset class. If the held fund fails to meet the criteria, it is treated as an uncovered portion of the fund of funds. The held fund does not need to meet the 65% coverage threshold required for the fund of funds itself, although the weight of the held fund is adjusted downward to account for coverage less than 100%. Exhibit 18 shows how the eligibility and coverage adjustment work.

Exhibit 18: Example showing calculation of eligibility and coverage adjustment

Holding	Weight (w_d)	Fund Latest Holding Date	Fund Holdings Count	Fund Eligibility	Fund ESG Coverage Overall (%)	Weight Adjusted for Coverage (w_c)	Weight Rebased to 100% (w_r)
Fund 1	60%	< 1 yr old	2,050	Eligible	100%	60%	82.76%
Fund 2	20%	< 1 yr old	85	Eligible	50%	10%	13.79%
Fund 3	10%	< 1 yr old	***1***	***Eligible***	25%	2%	3.45%
Fund 4	10%	***> 1 yr old***	1,400	***Not eligible***	85%		
	100%					**72%**	**100%**

Source: MSCI S&C.

The coverage adjustment may vary by data point since different MSCI S&C products have different coverage.

For the calculation of metrics for funds of funds, held funds are treated in the same manner as issuer's securities are treated for the calculation of metrics for funds. Because funds of funds can hold individual issuer's securities as well as funds, calculations can be made using either issuers or funds, or a combination of the two (after adjusting weights for coverage). When funds hold both issuers and funds, the issuer securities are included using the issuer level ESG metrics, and the fund securities are included using the comparable fund ESG metric.

For example, the Fund Weighted Average Carbon Intensity metric for a fund of funds would use the Carbon Emissions – Scope 1 & 2 Intensity metric for underlying holdings that are securities, and the Fund Weighted Average Carbon Intensity for underlying holdings that are funds. Exhibit 19 shows examples for both weighted average and percentage sum calculations for a fund with holdings of both securities and funds.

Exhibit 19: Example showing fund of funds weighted average and percentage sum calculations

		Weighted Average Example		Percentage Sum Example	
		Fund	Issuer	Fund	Issuer
Weight		Fund Weighted Average Carbon Intensity	Carbon Emissions Scope 1 & 2 intensity	Fund Tobacco Involvement	Tobacco - Any Tie
Fund A	75%	200	n/a	10%	n/a
Corporate 1	25%	n/a	100	n/a	True
	100%	**175**		**32.5%**	

Note: Calculation assumes 100% coverage of Fund A

When funds are held as short positions, they are treated the same as issuer securities held as short positions. When calculating the Fund ESG Coverage (%) metric, the gross weight of the short fund is considered as an unrated allocation in the fund of funds. For all other metrics, the short positions are removed, remaining holdings are normalized to 100% weight, and calculations are run on the long-only portion of the fund of funds.

11 Data updates

Fund holdings are received on a weekly basis, reflecting the most recently available data sourced from Lipper. Fund metrics are calculated daily to reflect updates to the ESG data of underlying holdings.

Appendix 1: Eligible asset types

MSCI S&C generally conducts ESG assessments at the issuer level. Where an asset has exposure to an underlying issuer, we attempt to map the ESG characteristics of that issuer. For instance, we would map issuer analysis to both a bond and to a derivative based on that bond, to the extent possible. We do not, however, map in cases where there is exposure to multiple underlying issuers, such as index futures. Asset types that are eligible for ESG coverage are listed below:

Asset Type		
• Agency Security	• Depository Receipt	• Preferred Security
• American Depository Receipt	• Global Depository Receipt	• Provincial Bonds
• Certificate	• Government Debt	• Real Estate Investment Trust
• Common Shares	• Municipal Bonds	• Rights
• Corporate Debt	• Preference Shares	• Supranational
		• Units

Appendix 2: Excluded asset types

Some asset types are out of scope for ESG analysis. They are removed from a fund's holdings prior to calculating ESG Coverage to avoid penalizing funds for allocations in these asset types. ESG Coverage is reflective only of the portion of the fund relevant to ESG considerations. Asset types that are removed prior to calculating ESG Coverage are listed below:

Asset Type		
• Cash	• Cash Equivalent	• FX Forward
• Cash 120 days	• Cash Options	• Interest Rate Swap
• Cash 30 days	• Currency	• Time/Term Deposit
• Cash 60 days	• Currency Future	• Commodity
• Cash 90 days	• Foreign Exchange	• Repurchase Agreement

Appendix 3: Fund ESG Rating additional disclosures

Data sources and data updates

The Fund ESG Rating is calculated based on holdings data sourced from Lipper, which is a mixture of public and non-public data, and issuer data from MSCI ESG Ratings and MSCI ESG Government Ratings. Fund holdings are received on a weekly basis, reflecting the most recently available data sourced from Lipper. For additional details on the data sources, including which are public and non-public, and data update frequency of MSCI ESG Ratings of company issuers, refer to "MSCI ESG Ratings Methodology." For additional details on the data sources, including which are public and non-public, and data update frequency of MSCI ESG Ratings of sovereign issuers, refer to "MSCI ESG Government Ratings Methodology."

Data sourced from NFRD or SFDR

Some data used in the Fund ESG Rating methodology may be disclosed by companies as part of sustainability statements required by Directive 2013/34/EU and Regulation (EU) 2019/2088. However, this data may also be collected independently of these disclosures.

NFRD-aligned data disclosure

The Fund ESG Rating is calculated based on issuer data from MSCI ESG Ratings. For NFRD-aligned data disclosure of company ratings, refer to "MSCI ESG Ratings Methodology." For NFRD-aligned data disclosure of sovereign ratings, refer to "MSCI ESG Government Ratings Methodology."

Industry classification used

The Lipper Global Classification is developed by Lipper. The classification is consulted on the date a fund's holdings are received or updated. The methodology is available at https://lipperalpha.refinitiv.com/lipper/fund-classifications/.

Limitations in data sources and methodologies

Holdings dates vary by fund, and may range from current to one year old. The frequency of updates to holdings also vary by fund. There is no defined range, but holdings older than one year are not eligible for analysis. For additional details on limitations in data sources and methodology of MSCI ESG Ratings of company issuers, refer to "MSCI ESG Ratings Methodology." For additional details on limitations in data sources and methodology of MSCI ESG Ratings of sovereign issuers, refer to "MSCI ESG Government Ratings Methodology."

Data quality assurance

Data quality checks are conducted on the input data, prior to fund calculations. All fund metrics calculations are fully automated and include no analyst involvement.

International agreements

The overall Fund ESG Rating methodology does not explicitly take into account the targets or objectives of the Paris Agreement or any other specific international agreement.

Not based on scientific evidence

The overall Fund ESG Rating methodology is not based on specific scientific evidence. For details on the basis on scientific evidence of the underlying issuer-level methodologies, see "MSCI ESG Ratings Methodology," "MSCI ESG Government Ratings Methodology" and "MSCI ESG Ratings Process."

AI disclosure

Artificial intelligence is not used in the Fund ESG Rating methodology.

Engagement process with rated entities

MSCI S&C is committed to transparent communication with rated items and issuers of rated items in our coverage universe. For more details, please refer to the "Procedures of Engagement with Rated Entities" document on msci.com.

Consistent application of methodology

As a quantitative model, the Fund ESG Rating is determined in a consistent manner for all assessed funds.

Methodology governance and update process

MSCI S&C has established an internal methodology committee that presides over the development, review and approval of all MSCI S&C methodologies, including the Fund ESG Rating. All material methodology and/or model update proposals are subject to market consultation prior to approval for implementation by this committee.

Data quality assurance

Data quality checks are conducted on the input data, prior to fund calculations. All fund metrics calculations are fully automated and include no analyst involvement.

Orientation in time

The Fund ESG Rating is a point-in-time assessment reflecting the time orientation of MSCI S&C's issuer rating methodologies. For additional details on the time orientation of MSCI ESG Ratings of company issuers, refer to "MSCI ESG Ratings Methodology." For additional details on the time orientation of MSCI ESG Ratings of sovereign issuers, refer to "MSCI ESG Government Ratings Methodology."

Appendix 4: Fund Energy Transition Score additional disclosures

Data sources and data updates

The Fund Energy Transition Score is calculated based on holdings data sourced from Lipper, which is a mixture of public and non-public data, and issuer data from the MSCI Energy Transition Framework. Fund holdings are received on a weekly basis, reflecting the most recently available data sourced from Lipper. For additional details on the data sources, including which are public and non-public, and data update frequency of the MSCI Energy Transition Framework data of company issuers, refer to "Energy Transition Framework Methodology."

Data sourced from NFRD or SFDR

Some data used in the Fund Energy Transition Score methodology may be disclosed by companies as part of sustainability statements required by Directive 2013/34/EU and Regulation (EU) 2019/2088. However, this data may also be collected independently of these disclosures.

NFRD-aligned data disclosure

The Fund Energy Transition Score is calculated based on issuer data from the MSCI Energy Transition Framework. For NFRD-aligned data disclosure of the Energy Transition Framework, refer to "MSCI Energy Transition Framework Methodology."

Industry classification used

The Lipper Global Classification is developed by Lipper. The classification is consulted on the date a fund's holdings are received or updated. The methodology is available at https://lipperalpha.refinitiv.com/lipper/fund-classifications/

Limitations in data sources and methodologies

Holdings dates vary by fund, and may range from current to one year old. The frequency of updates to holdings also vary by fund. There is no defined range, but holdings older than one year are not eligible for analysis. For additional details on limitations in data sources and methodology of the MSCI Energy Transition Framework data of company issuers, refer to "Energy Transition Framework Methodology."

Data quality assurance

Data quality checks are conducted on the input data, prior to fund calculations. All fund metrics calculations are fully automated and include no analyst involvement.

International agreements

The overall Fund Energy Transition Score methodology does not explicitly take into account the targets or objectives of the Paris Agreement or any other specific international agreement.

Not based on scientific evidence

The overall Fund Energy Transition Score methodology is not based on specific scientific evidence. For details on the basis on scientific evidence of the underlying issuer-level methodology, see “Energy Transition Framework Methodology.”

AI disclosure

Artificial intelligence is not used in the Fund Energy Transition Score methodology.

Engagement process with rated entities

MSCI S&C is committed to transparent communication with rated items and issuers of rated items in our coverage universe. For more details, please refer to the “Procedures of Engagement with Rated Entities” document on msci.com.

Consistent application of methodology

As a quantitative model, the Fund Energy Transition Score is determined in a consistent manner for all assessed funds.

Methodology governance and update process

MSCI S&C has established an internal methodology committee that presides over the development, review and approval of all MSCI S&C methodologies, including the Fund Energy Transition Score. All material methodology and/or model update proposals are subject to market consultation prior to approval for implementation by this committee.

Data quality assurance

Data quality checks are conducted on the input data, prior to fund calculations. All fund metrics calculations are fully automated and include no analyst involvement.

Orientation in time

The Fund Energy Transition Score is a point-in-time assessment reflecting the time orientation of MSCI S&C’s issuer rating methodology. For additional details on the time orientation of Energy Transition Scores of company issuers, refer to ““Energy Transition Framework Methodology.”

Appendix 5: Fund Implied Temperature Rise additional disclosures

Data sources and data updates

The Fund Implied Temperature Rise is calculated based on holdings data sourced from Lipper, which is a mixture of public and non-public data, and issuer data from MSCI's Implied Temperature Rise model. Fund holdings are received on a weekly basis, reflecting the most recently available data sourced from Lipper. For additional details on the data sources, including which are public and non-public, and data update frequency of the Implied Temperature Rise model of corporates, refer to "Implied Temperature Rise Methodology." For additional details on the data sources, including which are public and non-public, and data update frequency of the Implied Temperature Rise model of sovereigns, refer to "MSCI Country Scope 1 Emissions Implied Temperature Rise Methodology."

Data sourced from NFRD or SFDR

Some data used in the Fund Implied Temperature Rise methodology may be disclosed by companies as part of sustainability statements required by Directive 2013/34/EU and Regulation (EU) 2019/2088. However, this data may also be collected independently of these disclosures.

NFRD-aligned data disclosure

The Fund Implied Temperature Rise is calculated based on issuer data from MSCI's Implied Temperature Rise model. For NFRD-aligned data disclosure of the Implied Temperature Rise model, refer to "Implied Temperature Rise Methodology" and "MSCI Country Scope 1 Emissions Implied Temperature Rise Methodology."

Industry classification used

The Lipper Global Classification is developed by Lipper. The classification is consulted on the date a fund's holdings are received or updated. The methodology is available at https://lipperalpha.refinitiv.com/lipper/fund-classifications/

Limitations in data sources and methodologies

Holdings dates vary by fund, and may range from current to one year old. The frequency of updates to holdings also vary by fund. There is no defined range, but holdings older than one year are not eligible for analysis. For additional details on limitations in data sources and methodologies of the Implied Temperature Rise model of corporates, refer to "Implied Temperature Rise Methodology." For additional details on limitations in data sources and methodologies of the Implied Temperature Rise model of sovereigns, refer to "MSCI Country Scope 1 Emissions Implied Temperature Rise Methodology."

Data quality assurance

Data quality checks are conducted on the input data, prior to fund calculations. All fund metrics calculations are fully automated and include no analyst involvement.

International agreements

The Fund Implied Temperature Rise methodology is based on MSCI S&C's Implied Temperature Methodology, which does take international agreements into account. For details, see "Implied Temperature Rise Methodology" and "MSCI Country Scope 1 Emissions Implied Temperature Rise Methodology."

Not based on scientific evidence

The overall Fund Implied Temperature Rise methodology is not based on specific scientific evidence. For details on the basis on scientific evidence of the underlying issuer-level methodology, see "Implied Temperature Rise Methodology."

AI disclosure

Artificial intelligence is not used in the Fund Implied Temperature Rise methodology.

Engagement process with rated entities

MSCI S&C is committed to transparent communication with rated items and issuers of rated items in our coverage universe. For more details, please refer to the "Procedures of Engagement with Rated Entities" document on msci.com.

Consistent application of methodology

As a quantitative model, the Fund Implied Temperature Rise is determined in a consistent manner for all assessed funds.

Methodology governance and update process

MSCI S&C has established an internal methodology committee that presides over the development, review and approval of all MSCI S&C methodologies, including the Fund Implied Temperature Rise. All material methodology and/or model update proposals are subject to market consultation prior to approval for implementation by this committee.

Data quality assurance

Data quality checks are conducted on the input data, prior to fund calculations. All fund metrics calculations are fully automated and include no analyst involvement.

Orientation in time

The Fund Implied Temperature Rise is a point-in-time assessment reflecting the time orientation of MSCI S&C's issuer rating methodologies. For additional details on the time orientation of Implied

Temperature Rise of company issuers, refer to "Implied Temperature Rise Methodology." For additional details on the time orientation of Implied Temperature Rise of sovereign issuers, refer to "MSCI Country Scope 1 Emissions Implied Temperature Rise Methodology."

Appendix 6: Fund Low Carbon Transition additional disclosures

Data sources and data updates

The Fund Low Carbon Transition Score is calculated based on holdings data sourced from Lipper, which is a mixture of public and non-public data, and issuer data from MSCI's Low Carbon Transition Risk model. Fund holdings are received on a weekly basis, reflecting the most recently available data sourced from Lipper. For additional details on the data sources, including which are public and non-public, and data update frequency of the Low Carbon Transition data of company issuers, refer to "Low Carbon Transition Risk Assessment."

Data sourced from NFRD or SFDR

Some data used in the Fund Low Carbon Transition Score methodology may be disclosed by companies as part of sustainability statements required by Directive 2013/34/EU and Regulation (EU) 2019/2088. However, this data may also be collected independently of these disclosures.

NFRD-aligned data disclosure

The Fund Low Carbon Transition Score is calculated based on issuer data from MSCI's Low Carbon Transition Risk model. For NFRD-aligned data disclosure of the Low Carbon Transition model, refer to "Low Carbon Transition Risk Assessment."

Industry classification used

The Lipper Global Classification is developed by Lipper. The classification is consulted on the date a fund's holdings are received or updated. The methodology is available at https://lipperalpha.refinitiv.com/lipper/fund-classifications/

Limitations in data sources and methodologies

Holdings dates vary by fund, and may range from current to one year old. The frequency of updates to holdings also vary by fund. There is no defined range, but holdings older than one year are not eligible for analysis. For additional details on limitations in data sources and methodology of the Low Carbon Transition data of company issuers, refer to "Low Carbon Transition Risk Assessment."

Data quality assurance

Data quality checks are conducted on the input data, prior to fund calculations. All fund metrics calculations are fully automated and include no analyst involvement.

International agreements

The overall Fund Low Carbon Transition Score methodology does not explicitly take into account the targets or objectives of the Paris Agreement or any other specific international agreement.

Not based on scientific evidence

The overall Fund Low Carbon Transition Score methodology is not based on specific scientific evidence. For details on the basis on scientific evidence of the underlying issuer-level methodology, see "Low Carbon Transition Risk Assessment."

AI disclosure

Artificial intelligence is not used in the Fund Low Carbon Transition Score methodology.

Engagement process with rated entities

MSCI S&C is committed to transparent communication with rated items and issuers of rated items in our coverage universe. For more details, please refer to the "Procedures of Engagement with Rated Entities" document on msci.com.

Consistent application of methodology

As a quantitative model, the Fund Low Carbon Transition Score is determined in a consistent manner for all assessed funds.

Methodology governance and update process

MSCI S&C has established an internal methodology committee that presides over the development, review and approval of all MSCI S&C methodologies, including the Fund Low Carbon Transition. All material methodology and/or model update proposals are subject to market consultation prior to approval for implementation by this committee.

Data quality assurance

Data quality checks are conducted on the input data, prior to fund calculations. All fund metrics calculations are fully automated and include no analyst involvement.

Orientation in time

The Fund Low Carbon Transition Score is a point-in-time assessment reflecting the time orientation of MSCI S&C's issuer rating methodology. For additional details on the time orientation of Low Carbon Transition Scores of company issuers, refer to "Low Carbon Transition Risk Assessment."

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