Paris Aligned Investing Initiative (PAII) Net Zero Investment Framework 2.0 (NZIF 2.0) – An indicative mapping

MSCI ESG Research LLC

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Contents

1. Introduction

1.1. Overview

The Paris Agreement's[1] maximal goal to limit global warming to 1.5°C may help mitigate the catastrophic impact of climate change.[2] According to the Intergovernmental Panel on Climate Change (IPCC), this is conditioned on the world economy reaching net-zero emissions by the year 2050[3] — hence the shorthand term "net-zero" to designate a 1.5°C-aligned transition alignment of the global economy. While in aggregate the global economy may not be on this trajectory, individual companies and portfolios can align to this goal.

The Net Zero Investment Framework 2.0 (NZIF 2.0)4 is a widely used guidance to set targets and produce related to net zero strategies and transition plans.

The NZIF 2.0 includes an alignment maturity scale, a metric that groups portfolio companies into alignment categories, from Not Aligning to Achieving Net Zero.[5] These alignment categories are defined by criteria such as, for instance, disclosing company emissions.

In June 2024, the PAII published an updated "2.0" version of the NZIF guidance, which results in certain amendments of the maturity scale. In this version, the criteria-based definitions of Aligned and Aligning companies are broadly consistent with those proposed by the Glasgow Financial Alliance for Net Zero (GFANZ).[6]

MSCI ESG Research has developed an indicative data mapping solution by mapping MSCI ESG Research LLC data points to criteria of the NZIF 2.0 guidance, a non-regulatory framework. This indicative mapping is provided to help illustrate how standard MSCI ESG Research data points may identify indicators associated with the NZIF.[7]

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[1] The Paris Agreement is an international treaty on climate change adopted by 196 Parties at the United Nations (UN) Climate Change Conference (COP21) in Paris, France. Its overarching goal is to keep global warming to well below 2°C, and aim for 1.5°C, compared to preindustrial levels.

[2] "Urgent climate action can secure a livable future for all." IPCC, March 20th, 2023.

[3] "Special Report: Global Warming of 1.5 ºC." IPCC, 2018.

[4] "Net Zero Investment Framework 2.0.", IIGCC, June 2024. The NZIF 2.0 guidance was developed by the Paris Aligned Investment Initiative (PAII), an investor-led forum established in May 2019 by the Institutional Investors Group on Climate Change (IIGCC), the Asia Investor Group on Climate Change, the Investor Group on Climate Change and the Ceres. The Paris Aligned Asset Owners (PAAO) and the Net Zero Asset Managers initiative (NZAM), two net-zero alliances, refer to this guidance too.

[5] "Net Zero Investment Framework 2.0", PAII, 2024, p.24. Note that we shorten the terms used by the guidance for ease of comparison with our previous MSCI NZIF 1.0 mapping: "Aligned" for "Aligned to a net zero pathway" (guidance); "Aligning" for "Aligning to a net zero pathway" (guidance); "Committed" for "Committed to aligning" (guidance). The other short terms we use "Not Aligning" and "Achieving Net Zero" are similar to those used by the guidance. We also maintain the numbering of criteria 1 to 6, for the same reason.

[6] "Scaling Transition Finance and Real-economy Decarbonization. Supplement to the 2022 Net-zero Transition Plans report." GFANZ, December 2023, p.31.

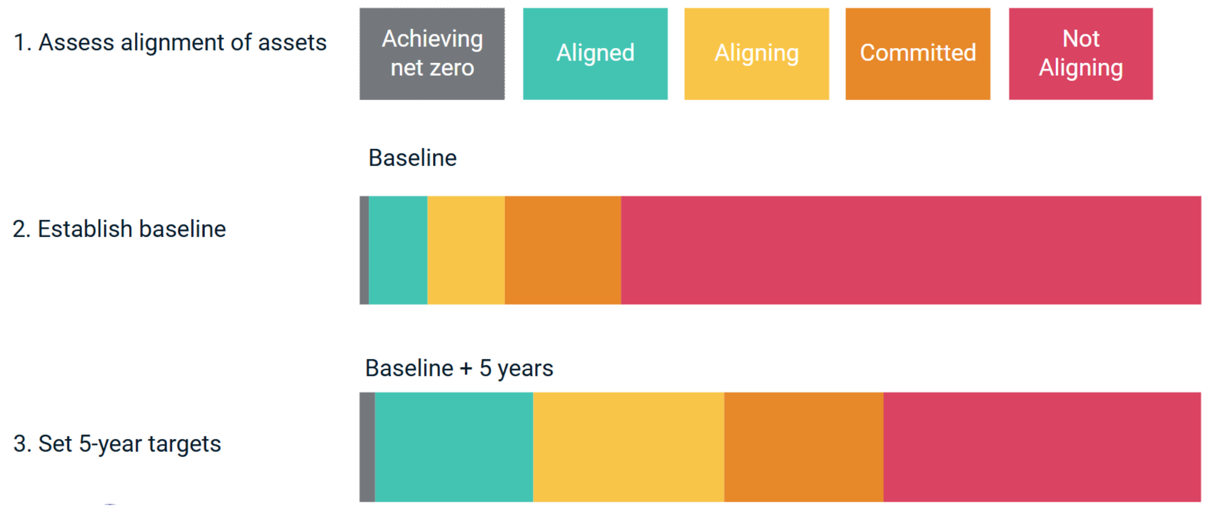
[7] This information does not constitute legal advice or binding interpretation.

1.2. Interpretation and usage

The NZIF 2.0 maturity scale is a tool to assess the alignment of different asset classes. This document focuses on the maturity scale for listed equity and corporate fixed income assets.

The NZIF 2.0 explicitly supports five-year horizon target-setting on portfolios for increasing the percentage of Assets under Management (AUM) in the alignment categories "Achieving Net Zero", "Aligned" and "Aligning" in material sectors.[8] An illustration is provided below.

Exhibit 1 – Stylized representation of a portfolio through a NZIF target-setting view



Source: MSCI ESG Research, Paris Aligned Investment Initiative (PAII) Net Zero Investment Framework 2.0 (2024).

Exhibit 1 illustrates the NZIF guidance approach. The first step consists of mapping portfolio companies to the relevant NZIF categories. This enables the baseline alignment state of the portfolio to be established and an understanding of how company weights in a portfolio are reflected in each alignment category. Then, the five-year horizon targets aim to increase the proportion of company portfolio weights in the more aligned buckets of the maturity scale.

In addition, the NZIF 2.0 guidance provides some performance expectations, which are not to be confused with requirements:[9]

- An expectation that "by 2040, 100% of assets are, as a minimum, aligned to a net zero pathway".[10]
- An expectation that "[w]ithin the engagement threshold target… investors set an engagement threshold target which immediately ensures that at least 70% of scope 1 and 2 financed emissions in material sectors are originating in assets that are either categorized as

[8] The NZIF suggests an engagement goal which ensures that at least 70% of financed emissions in material sectors are either assessed as net-zero, aligned with a net-zero pathway, or the subject of direct or collective engagement and stewardship actions.

[9] "Net Zero Investment Framework 2.0", PAII, 2024, p.22.

[10] "Net Zero Investment Framework 2.0.", IIGCC, June 2024, p.21.

achieving net zero, aligned to a net zero pathway, or are subject to engagement and stewardship actions. This threshold should increase at least to 90% by 2030 at the latest".[11]

The NZIF 2.0 guidance emphasizes that it is "only a guide, not a prescriptive protocol, nor a standard". It adds that "[i]nvestors should use it within the context of their own strategies, agendas, starting points, fiduciary duties, client mandates and regulatory considerations, from which and with which they make their own unilateral decisions regarding the ways and means with which they will set and reach their own net zero goals".[12]

Alternative Approaches Utilizing MSCI ESG Research Data

An investor may choose an alternative approach to mapping the NZIF 2.0 guidance and still be considered to have followed NZIF 2.0 guidance.

For instance, an investor can choose a high impact sector definition that does not include health care companies, despite the IIGCC including these in its indicative sector mapping. Similarly, an investor could interpret criteria 1 not as a comprehensive net-zero target (as is the case in this indicative methodology), but as board level recognition of climate risks and opportunities.

A customized NZIF 2.0 mapping approach may be supported by using alternative MSCI data points (e.g. sector, transition plan data).

[11] "Net Zero Investment Framework 2.0.", IIGCC, June 2024, p.21.

[12] "Net Zero Investment Framework 2.0", PAII, 2024, p.7.

2. Methodology

2.1. How the NZIF 2.0 guidance defines alignment categories based on certain criteria

Based on NZIF 2.0 guidance, MSCI ESG Research alignment categories as shown in Exhibit 2.

Exhibit 2: MSCI PAII NZIF 2.0 Alignment Categories

Achieving Net Zero	Companies that have previously met all alignment criteria and have an emissions performance at net zero which can be expected to continue. They are considered to have achieved their low-carbon transition.
Aligned	Companies that have a net-zero goal; science-based targets; a decarbonization plan (except for lower impact companies); and current absolute or emissions intensity at least equal to a relevant net zero pathway. They are considered to manage transition risk.
Aligning	Companies that have an emissions performance not equal to a contextually relevant net zero pathway. However, they have a net-zero goal; science-based targets; and a decarbonization plan (except for lower impact companies). They are considered ready to transition.
Committed	Companies that have a net-zero goal. They are considered to have an alignment ambition but lack some key transition steps (e.g., science-based targets).
Not Aligning	Companies that do not fall into any other alignment category.

Source: MSCI ESG Research, Paris Aligned Investment Initiative (PAII) Net Zero Investment Framework (NZIF 2.0) (2024), p.22.

The NZIF 2.0 maturity scale guidance places companies into alignment categories based on how these companies meet, or fail to meet, each of the following criteria:

> **Net Zero criteria**: Current emissions intensity performance at, or close to, net-zero emissions with an investment plan or business model expected to continue to achieve that goal overtime
>
> **1. Ambition:** A long-term goal consistent with the global goal of achieving net zero by 2050.
>
> **2. Targets:** Short- and medium-term science-based targets to reduce GHG emissions.
>
> **3. Emissions performance:** Current absolute or emissions intensity is at least equal to a relevant net zero pathway.
>
> **4. Disclosure:** Disclosure of operational scope 1, 2 and material scope 3 emissions.
>
> **5. Decarbonization Strategy:** A quantified set of measures exists to achieve short- and medium-term science-based targets by reducing GHGs and increasing green revenues, when relevant.
>
> **6. Capital Allocation Alignment:** A clear demonstration that capital expenditures are consistent with a relevant net zero pathway.

Each alignment category is defined by specific criteria, as illustrated in Exhibit 3. The NZIF 2.0 maturity scale is thus designed to represent alignment progress, from the least aligned category Not Aligning to the most aligned category Achieving Net Zero. For instance, a company having only a long-term 2050 goal consistent with achieving global net-zero should be categorized as Committed.

Exhibit 3 – NZIF 2.0 maturity scale alignment categories and criteria

Criteria for lower impact companies

Asset alignment criteria						
Criteria	**Descriptions**	**Net-zero**	**Aligned**	**Aligning**	**Committed**	**Not aligning**
Net-zero criteria	Asset with emissions intensity required by the sector and regional pathway for 2050 and whose operational model will maintain this performance	X				
1. Ambition	A long-term 2050 goal consistent with achieving global net-zero		X	X	X	
2. Targets	Short- and medium-term science-based targets to reduce GHG emissions		X	X		
3. Emissions performance	Current absolute or emissions intensity is at least equal to a relevant net zero pathway		X			
4. Disclosure	Disclosure of operational Scope 1, 2 and material Scope 3 emissions		X	X		
5. Decarbonization plan	A quantified set of measures exists to achieve short- and medium-term science-based targets by reducing GHGs and increasing green revenues, when relevant.		X	X		
6. Capital allocation alignment	A clear demonstration that capital expenditures are consistent with a relevant net zero pathway		X			

Source: MSCI ESG Research, Paris Aligned Investment Initiative (PAII) Net Zero Investment Framework (NZIF 2.0) (2024).

The criteria-based definition of the Aligned and Aligning categories is broadly consistent with that proposed by GFANZ.[13] This makes using a NZIF 2.0 maturity scale similar to using a GFANZ maturity scale.

Note, the Aligned and Aligning categories require more criteria to be met by companies in *high impact* sectors, which are both key to decarbonizing the economy and more exposed to transition risk. These sectors are defined by the NZIF 2.0 as those represented on the focus lists of Climate Action 100+ and Transition Pathway Initiative sectors (TPI); banks; real estate; agriculture, forestry, and fishing companies.[14]

These higher impact companies represent around 75% of companies in the MSCI ACWI Investable Market Index (ACWI IMI), as of January 2025. All companies outside of this higher impact scope are considered *lower impact* companies by the NZIF 2.0 and can fulfill fewer criteria to be considered Aligned or Aligning.

[13] "Scaling Transition Finance and Real-economy Decarbonization. Supplement to the 2022 Net-zero Transition Plans report." GFANZ, December 2023, p.31.

[14] "Net Zero Investment Framework 2.0", PAII, 2024, p.23.

A detailed mapping of those sectors to the classification of the Global Industry Classification Standard (GICS®),[15] in available in Annex 2.

2.2. How MSCI ESG Research data points are mapped to these criteria

MSCI ESG Research's data on NZIF 2.0 alignment categories, criteria and higher impact/lower impact status are available on our distribution platforms.

Exhibit 4 – Stylized extract of our issuer-level NZIF 2.0 data

ISSUER_NAME	PAII_NZIF_IMPACT	PAII_NZIF_ALIGNMENT	PAII_NZIF_NZ_ CRITERIA	PAII_NZIF_ CRITERIA_1	PAII_NZIF_ CRITERIA_2	PAII_NZIF_ CRITERIA_3	PAII_NZIF 2.0_ CRITERIA_4	PAII_NZIF_ CRITERIA_5	PAII_NZIF_ CRITERIA_6
Company A	Higher impact	Committed		True				False	Not available
Company B	Higher impact	Aligning		True	True		True	True	Not available
Company C	Lower impact	Aligned		True	True	True	True	True	Not available
Company D	Higher impact	Not Aligning						True	Not available
Company E	Higher impact	Aligned		True	True	True	True	True	Not available

Source: MSCI ESG Research. This is an illustration, not based on actual company data.

For companies to be mapped to NZIF 2.0 alignment categories, the criteria and definitions expressed in the NZIF 2.0 must be tied to precise issuer-level data points – especially where NZIF 2.0 guidance is not explicit. For instance, what is referred to as "material Scope 3" by the NZIF 2.0 (criteria 4) needs to be quantified with a certain metric.

This section details our proposed indicative mapping of "higher impact" companies and criteria based on MSCI ESG Research data points.

Distinction between higher impact companies and lower impact companies

The NZIF 2.0 requires higher impact companies to meet more alignment criteria than lower impact companies. See Exhibit 3 above.

MSCI ESG Research applies the GICS mapping strictly to high impact sectors set out by the IIGCC. The mapping can be seen in Annex 2.

All companies outside of this higher impact scope are considered lower impact companies by the NZIF 2.0. Our high impact sector mapping reflects this guidance.

Achieving Net Zero criteria

The NZIF 2.0 guidance describes this criterion as "Asset with emissions intensity required by the sector and regional pathway for 2050 and whose operational model will maintain this performance."

MSCI ESG Research considers this criterion to be met based on two data points. First, the company's total emissions intensity must be equal to zero (based on reported emissions if

[15] GICS is the global industry classification standard jointly developed by MSCI and S&P Global Market Intelligence.

available for Scope 1 and Scope 2, estimated otherwise; and estimated Scope 3). [16] Second, the company must be projected to maintain net-zero emissions consistent with the emissions coverage defined by the Science-Based Targets initiative (SBTi) for science-based long-term corporate targets i.e., covering at least 95% of emissions in company-wide Scope 1 and Scope 2 emissions and 90% of Scope 3 emissions by 2050.[17]

Rationale

- The indicative mapping requires total current emission intensity to be at strictly zero and does not consider companies "close to" net-zero. This is because net-zero intensity pathways for diversified companies tend to be economic ones (expressed in emissions per USD sales or EVIC for instance), and not physical ones (e.g., emissions per unit of cement). In economic intensity benchmarking (tCO2e/USD), "close to net-zero" may be achieved through growing the economic denominator faster than emissions (e.g., through inflation or improved profit margins). These extrinsic monetary factors risk misleading the interpretation of company alignment performance.[18] In practice, this mapping's zero intensity requirement makes it unlikely for any company to be considered as Achieving Net Zero as of now. Proven carbon neutrality is hardly achievable in today's energy system.
- The second data point (projected emissions consistent with the SBTi net-zero definition of science-based long-term corporate targets by 2050) ensures forward-looking performance remains aligned with net-zero, in line with the "investment plan or business model expected to continue to achieve that goal over time".

Criteria 1 (Ambition)

The NZIF 2.0 guidance describes this criterion as "A long term goal consistent with the global goal of achieving net zero by 2050."

MSCI ESG Research considers this criterion to be met if the company is projected to reach net-zero emissions consistent with the emissions coverage defined by the SBTi for science-based long-term corporate targets i.e., covering at least 95% of emissions in company-wide Scope 1 and Scope 2 emissions and 90% of Scope 3 emissions by 2050, or sooner. [19] The company can

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[16] Under MSCI ESG Research's Scope 1+2 carbon emissions estimation approach, estimates of carbon intensity are produced at the company level and at the industry-segment level. MSCI ESG Research uses one out of the following three models (listed in order of preference) to estimate any company's carbon emissions. MSCI ESG Research uses the production model to specifically estimate direct emissions due to power generation for electric utilities, i.e., Scope 1 emissions of utilities. This model uses power generation fuel-mix data to estimate Scope 1 emissions. For companies that have reported Scope 1 or Scope 2 carbon emissions data in the past but not for all years, MSCI ESG Research applies the company-specific intensity model, which is based on data previously reported by the company. If the company does not report and has never reported, MSCI ESG Research uses the industry segment specific intensity model, which is based on the estimated carbon intensities of 1,000+ industry segments. Regarding the estimated Scope 3 emissions methodology, please refer to "Greenhouse Gas Emissions Methodologies." MSCI ESG Research, February 2024. Regarding the projected emissions methodology, please refer to "Climate Targets & Commitments Methodology." MSCI ESG Research, February 2024.

[17] "SBTi Corporate Net Zero Standard." Science-Based Targets initiative (SBTi), 2023.

[18] "Understand the methods for science-based climate action." Carillo Pineda, Alberto, Huusko, Heidi, Cummis, Cynthia, and Farsan, Alexander 2023.

[19] Under MSCI ESG Research's Scope 1+2 carbon emissions estimation approach, estimates of carbon intensity are produced at the company level and at the industry-segment level. MSCI ESG Research uses one out of the following three models (listed in order of preference) to estimate any company's carbon emissions. MSCI ESG Research uses the production model to specifically estimate direct emissions due to power generation for electric utilities, i.e., Scope 1 emissions of utilities. This

also validate the criteria if it has an officially validated long-term SBTi target, which is consistent with this net-zero definition.

Rationale

- It is important that this criterion covers all emissions scopes in line with the SBTi corporate net-zero standard for long-term targets. Consistency with achieving global net-zero is likely to involve not only company direct emissions, but also indirect emissions such as the emissions linked to the use of sold products for a car manufacturer (Scope 3 category 11), consistent with SBTi guidance. A stated net-zero target that covers only Scope 1 and Scope 2, for instance, may overlook more than 95% of a car manufacturer's total emissions.[20]
- It is important to note that in our indicative mapping, any type of company can be considered in this application of SBTi coverage criteria for long-term targets, including companies in fossil fuel sectors for which there is currently no formal SBTi target-approval process.[21]
- An official validation of long-term net zero targets by the SBTi can of course be another way of meeting this criterion.

Criteria 2 (Targets)

The NZIF 2.0 guidance describes this criterion as "Short and medium term science-based targets to reduce GHG emissions".

MSCI ESG Research considers this criterion to be met if the company has at least one one active near-term target that is "SBTi-Approved – 1.5°C" and a target year comprised in a rolling 10-year's horizon from today (e.g., equal to or earlier 2035 if a client looks at the data in 2025). The SBTi Corporate standard requires in practice to cover Scope 1, Scope 2 and material Scope 3 emissions (defined as 40% or more of total company emissions).

Rationale

- This mapping definition of material Scope 3 - 40%or more of total company emissions - is in line with the SBTi corporate net-zero standard, which requires companies to set near-term Scope 3 targets if that threshold is met.[22] MSCI ESG Research carries out this materiality assessment based on *estimated* Scope 3 estimations and not *reported* Scope 3 emissions. This is because the latter are often inconsistent and incomplete,[23] which makes them unreliable for the purpose of NZIF 2.0 mapping (e.g., a company reporting only on Scope 3

model uses power generation fuel-mix data to estimate Scope 1 emissions. For companies that have reported Scope 1 or Scope 2 carbon emissions data in the past but not for all years, MSCI ESG Research applies the company-specific intensity model, which is based on data previously reported by the company. If the company does not report and has never reported, MSCI ESG Research uses the industry segment specific intensity model, which is based on the estimated carbon intensities of 1,000+ industry segments. Regarding the estimated Scope 3 emissions methodology, please refer to "Greenhouse Gas Emissions Methodologies." MSCI ESG Research, February 2024. Regarding the projected emissions methodology, please refer to "Climate Targets & Commitments Methodology." MSCI ESG Research, February 2024.

[20] "Measuring Portfolio Alignment." GFANZ, November 2022.

[21] "Sector Guidance", SBTi, Accessed on 21 February 2024: https://sciencebasedtargets.org/sectors

[22] "SBTi Corporate Net Zero Standard." Science-Based Targets initiative (SBTi), 2023.

[23] Bokern, D. "Reported Emission Footprints: The Challenge is Real." MSCI Research Blog, March 9, 2022.

category 6 – Business travel, a small fraction of its Scope 3 emissions, might be misleading and appear as being under the 40% materiality threshold).

- MSCI ESG Research requires an eligible target to aim for a reduction within a rolling 10-years horizon from the current year, which is broadly consistent with the current Climate 100+'s framework definition of medium-term horizon year (2035).[24] It is also consistent with the SBTi Corporate Standard's horizon for near-term targets (5-10 years from the year of submission).[25]
- The NZIF 2.0 guidance recommends focusing on targets aligned with a science-based, global net-zero aligned pathway,[26] which is widely perceived as the gold standard for verifying the alignment of science-based targets with 1.5°C scenarios, as opposed to mere alignment claims by companies. The requirement to have SBTi–approved short-/medium-term targets means in practice that no fossil fuel company can currently become Aligned/Aligning in our NZIF mapping as the SBTi has not yet set a process for validating targets by fossil fuel companies.

Criteria 3 (Emissions Performance)

The NZIF 2.0 guidance describes this criterion as "Current absolute or emissions intensity is at least equal to a relevant net zero pathway".

MSCI ESG Research considers this criterion to be met if the company's recent absolute emissions appears to be below its remaining net zero annual carbon budget. More precisely, this assessment requires that under MSCI Implied Temperature Rise[27] model output, the first year of projected company emissions' value is below the first year of remaining NGFS NZ 2050 budget's value, following the approach illustrated below.

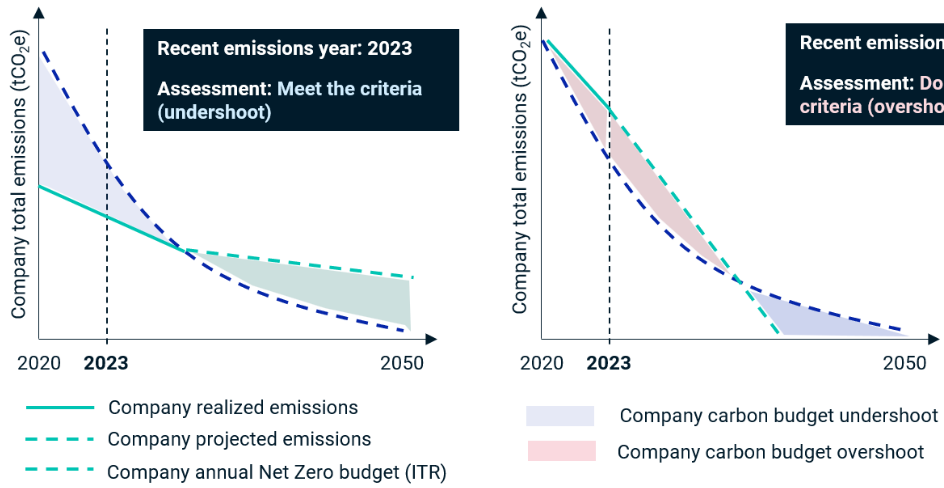
[24] "Methodologies: Net Zero Company Benchmark." Climate Action 100+. Accessed at https://www.climateaction100.org/net-zero-company-benchmark/methodology/ on January 30, 2024.

[25] "SBTi Corporate Net Zero Standard." Science-Based Targets initiative (SBTi), 2023.

[26] "Net Zero Investment Framework – Implementation Guide." Paris Aligned Investment Initiative (PAII), 2021, p.17.

[27] "Implied Temperature Rise Methodology." MSCI ESG Research, February 2024.

Exhibit 5 – Stylized examples of criteria 3 assessments



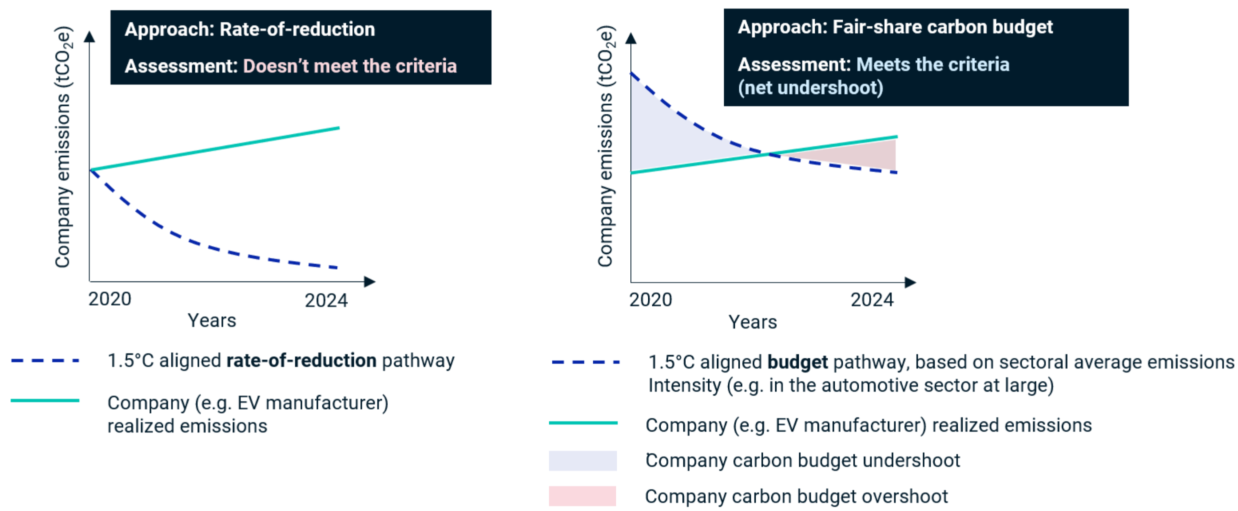
Source: MSCI ESG Research. This is an illustration, not based on actual company data.

Rationale

- MSCI ESG Research opted for a fair-share carbon budget interpretation of the NZIF 2.0 guidance criteria, using MSCI Implied Temperature Rise model that compares a company's absolute emissions performance against a budget reflecting the average intensity of its peer group (sectoral and regional).
- Relying on absolute emissions as a performance unit metric is consistent with the science-based concept of a finite 1.5°C-aligned emissions budget, by contrast with emissions intensity measurement which in theory makes 1.5°C alignment compatible with indefinite growth in absolute emissions unless zero intensity is the benchmark.
- As an absolute emissions assessment, MSCI ESG Research prefers a budget approach over a rate-of-reduction approach, which requires company's past emissions to follow the rate of reduction of a scenario (for instance, over the past three years). MSCI ESG Research does so because a rate-of-reduction approach would penalize companies that are already relatively low-carbon as well as companies providing climate solution, which may increase their company emissions in the short-run to provide products and services that displace more carbon intensive ones (e.g., electricity vehicles (EV) manufacturers whose emissions are expected to grow as they produce and sell more EVs).

Exhibit 6 illustrates the difference between the two approaches for a climate solution company.

Exhibit 6 – Stylized comparison of rate-of-reduction approach and fair-share carbon approach for a climate solution (e.g., EV manufacturer)



Source: MSCI ESG Research. This is an illustration, not based on actual company data.

Criteria 4 (Disclosure)

The NZIF 2.0 guidance describes this criterion as "Disclosure of operational scope 1, 2 and material scope 3 emissions".

We consider this criterion to be met if the company discloses its scope 3 emissions when the estimated scope 3 emissions of the company are 40% or more of the total emissions.

Rationale

- The material Scope 3 threshold applied is in line with the 40% SBTi corporate net-zero standard,[28] based on estimated Scope 3 emissions only.

MSCI ESG Research does not currently assess whether the volume of Scope 3 reported emissions is consistent with that of MSCI's Scope 3 estimation model. In some cases, companies may report significantly lower Scope 3 emissions than in MSCI ESG Research's estimation model. This can be for various legitimate reasons including different emissions estimation approaches and/or choosing to report only the most material Scope 3 categories.

Criteria 5 (Decarbonization Strategy)

The NZIF 2.0 guidance describes this criterion as "A quantified set of measures exists to achieve short- and medium-term science-based targets by reducing [greenhouse gas emissions] and increasing green revenues, when relevant".

MSCI ESG Research considers this criterion to be met if the company has programs to reduce emissions in core operations, including improving energy efficiency. Null values represent companies for which MSCI ESG Research has not yet collected this data point as these

[28] "SBTi Corporate Net Zero Standard." Science-Based Targets initiative (SBTi), 2023.

companies have only recently entered our coverage universe (for information on the coverage universe, see section 3.1). These companies are assumed to meet the criterion.

Rationale

- For the minority of companies where this data point is not yet collected, MSCI ESG Research assumes that these companies fulfill the criterion rather than assuming they do not because the latter approach would unfairly penalize companies with a transition plan, awaiting data collection.
- This data point covers the transition planning aspects of the NZIF 2.0 criteria. Future green revenue reporting is not available in our current database. MSCI ESG Research may refine the granularity of the mapping and analysis associated with criteria 5 once it has more collected granular company disclosures.
- The science-based targets component of criteria 5 is covered already under the updated mapping of criteria 2 (Targets), which is required to be met for all alignment categories where criteria 5 may be required too (Aligned, Aligning).

Criteria 6 (Capital Allocation Alignment)

The NZIF 2.0 guidance describes this criterion as “A clear demonstration that capital expenditures are consistent with a relevant net zero pathway”.

MSCI ESG Research currently does not have a relevant data point for mapping this criterion, so no company can be assessed against it. MSCI ESG Research considers that if all other “Aligned” criteria are met, higher impact companies can be mapped as “Aligned” by assuming this criterion is met too.

Rationale

- The mapping of this criterion against existing data points is demanding. The criterion implies looking at the alignment of current capital expenditures (Capex) with a net-zero aligned pathway to 2050, which would require significant modelling (e.g. different sectors have different net-zero science-based pathways in climate scenarios). The challenge is compounded by the fact that Capex reporting data is often inconsistently reported across listed companies, and particularly so in terms of climate-aligned categories (e.g., green taxonomy, fossil fuels vs non fossil fuel investments categorizations).
- In 2024, the MSCI Sustainability Institute supported an academic study on the topic of modelling Capex (the study is available on request). Looking at 109 utilities companies’ disclosures, the study finds that company Capex data is often not usable for alignment assessment, even among companies with a stated net-zero target (in particular, lack of basic breakdown between low-carbon and fossil fuel expenditures).
- Rather than using poor data point approximations, MSCI ESG Research prefers to omit this criterion from the list of criteria defining Aligned category for higher impact companies. This approach may change in the future as comprehensive, modelled and relevant Capex data may become available at scale.

3. Data and methodology updates

3.1. Coverage universe

The NZIF 2.0 coverage universe is determined by issuers' inclusion in the MSCI ESG Climate Change Metrics coverage universe. As of April 2025, this universe includes constituents of the MSCI ACWI Investable Markets Index (IMI) and constituents of selected other equity indexes[29] and fixed income issuers.[30]

3.2. Data quality assurance processes

Data quality assurance processes are conducted on all data prior to publication.

3.3. Methodology update processes

The ESG Methodology Committee ("EMC") presides over the development, review and approval of all MSCI ESG Research methodologies. Methodology update proposals are subject to market consultation prior to approval for implementation by the EMC.

3.4. Data update frequency

The NZIF 2.0 indicative mapping is updated on a biweekly basis to reflect the most recent company data i.e., from the time company data are updated in MSCI ESG Research databases, relevant changes would be reflected in the NZIF 2.0 within two weeks. Prior to publication, additional quality assurance may be conducted, making the update last up to 30 days.

Company data relevant to the computations include newly issued or updated corporate targets, new emissions figures. Regular data update cycles comprise the following:

- Scope 1, Scope 2 and Scope 3 reported emissions data and climate target announcements are collected when available (companies do not follow the same reporting schedule and format).[31] Data updates of emissions and targets in MSCI ESG Research databases can take several months,[32] followed by the inclusion into the NZIF 2.0 update that may take up to 30 days.
- Scope 3 emission data used in the NZIF 2.0 mapping methodology are currently produced by our estimation model.[33] They are recalculated on a biweekly basis, conditioned on new company data which can take months, and included in the NZIF 2.0 mapping in the same cycle of up to 30 days.

[29] MSCI China A International, MSCI Pakistan IMI, MSCI Argentina Standard, MSCI Domestic Kuwait, MSCI EFM AFRICA, MSCI Australia IMI+, MSCI New Zealand IMI+, MSCI Europe IMI+, MSCI UK IMI+.

[30] Corporate constituents of the Bloomberg Global Aggregate Index that meet our minimum disclosure threshold.

[31] For further details, please refer to the "Climate Targets & Commitments Methodology." MSCI ESG Research, February 2024.

[32] Timelines may shorten for data updates associated with data correction (up to 3-5 days), client queries (up to 3-5 days) and issuer (company) escalations (up to 30 days).

[33] "Greenhouse Gas Emissions Methodologies." MSCI ESG Research, June 2024.

- Data on programs to reduce carbon emissions (including energy efficiency improvements) in core operations are collected from companies' publicly available documents, such as annual reports, CDP reports, the Science Based Targets initiative, Form 10-K, Form 20-F, sustainability reports, investor presentations, and other companies' disclosures. They are updated within a year (five months for MSCI ACWI companies), starting the most recent annual filling (publication of annual and climate reports). Analysts verify that any change in this data point between a given fiscal year's value and the next is plausible. Null values represent companies for which MSCI has not yet collected this data point as these companies have only recently entered index coverage.

Appendix – High Impact Sectors (GICS mapping)

These include companies on the Climate 100+ list and the following sectors. MSCI ESG Research applies GICS sub-industry mapping in line with the IIGCC's proposed GICS mapping of high impact sectors. NZIF 2.0 mapping does not always apply to an entire GICS industry group, that is why it is helpful to identify the GICS *sub-industry* groups that are relevant.

NZIF 2.0 Sector Name	GICS Industry Group	GICS Sub Industry	GICS Sub Industry Code
Agriculture, forestry, and fishing	Materials	Forest Products	15105010
		Paper Products	15105020
	Capital Goods	Agricultural & Farm Machinery	20106015
	Food, Beverage & Tobacco	Agricultural Products & Services	30202010
Airlines	Transportation	Passenger Airlines	20302010
	Capital Goods	Aerospace & Defense	20101010
Automobiles	Automobiles & Components	Automotive Parts & Equipment	25101010
		Automobile Manufacturers	25102010
		Motorcycle Manufacturers	25102020
Banking	Banks	Diversified Banks	40101010
		Regional Banks	40101015
	Financial Services	Diversified Financial Services	40201020
		Multi-Sector Holdings	40201030
		Specialized Finance	40201040
		Commercial & Residential Mortgage Finance	40201050
		Transaction & Payment Processing Services	40201060
		Consumer Finance	40202010
		Asset Management & Custody Banks	40203010
		Investment Banking & Brokerage	40203020
		Diversified Capital Markets	40203030
		Financial Exchanges & Data	40203040
		Mortgage REITs	40204010
	Insurance	Multi-line Insurance	40301030
		Property & Casualty Insurance	40301040
		Reinsurance	40301050
Cement	Materials	Construction Materials	15102010
Chemicals	Materials	Commodity Chemicals	15101010
		Diversified Chemicals	15101020
		Fertilizers & Agricultural Chemicals	15101030
		Industrial Gases	15101040
		Specialty Chemicals	15101050
		Alternative Carriers	50101010

Consumer goods	Telecommunication Services	Integrated Telecommunication Services	50101020
	Pharmaceuticals, Biotechnology & Life Sciences	Biotechnology	35201010
		Pharmaceuticals	35202010
Coal & Diversified Mining	Energy	Oil & Gas Exploration & Production	10102020
	Capital Goods	Industrial Conglomerates	20105010
	Materials	Aluminum	15104010
		Diversified Metals & Mining	15104020
		Copper	15104025
		Gold	15104030
		Precious Metals & Minerals	15104040
		Silver	15104045
		Steel	15104050
Electric Utilities	Utilities	Electric Utilities	55101010
		Gas Utilities	55102010
		Multi-Utilities	55103010
		Water Utilities	55104010
		Independent Power and Renewable Electricity Producers	55105010
		Renewable Electricity	55105020
Food Producers	Food, Beverage & Tobacco	Brewers	30201010
		Distillers & Vintners	30201020
		Soft Drinks & Non-alcoholic Beverages	30201030
		Agricultural Products & Services	30202010
		Packaged Foods & Meats	30202030
Industrials	Software & Services	IT Consulting & Other Services	45102010
		Internet Services & Infrastructure	45102030
		Application Software	45103010
		Systems Software	45103020
	Technology Hardware & Equipment	Communications Equipment	45201020
		Technology Hardware, Storage & Peripherals	45202030
		Electronic Equipment & Instruments	45203010
		Electronic Components	45203015
		Electronic Manufacturing Services	45203020
		Technology Distributors	45203030
	Semiconductors & Semiconductor Equipment	Semiconductor Materials & Equipment	45301010
		Semiconductors	45301020
	Capital Goods	Construction & Engineering	20103010
		Electrical Components & Equipment	20104010
		Heavy Electrical Equipment	20104020

		Construction Machinery & Heavy Transportation Equipment	20106010
		Agricultural & Farm Machinery	20106015
		Industrial Machinery & Supplies & Components	20106020
	Materials	Metal, Glass & Plastic Containers	15103010
Oil and gas (plus distribution)	Energy	Oil & Gas Drilling	10101010
		Oil & Gas Equipment & Services	10101020
		Integrated Oil & Gas	10102010
		Oil & Gas Exploration & Production	10102020
		Oil & Gas Refining & Marketing	10102030
		Oil & Gas Storage & Transportation	10102040
		Coal & Consumable Fuels	10102050
Paper	Materials	Paper & Plastic Packaging Products & Materials	15103020
Real Estate	Equity Real Estate Investment Trusts (REITs)	Diversified REITs	60101010
		Industrial REITs	60102510
		Hotel & Resort REITs	60103010
		Office REITs	60104010
		Health Care REITs	60105010
		Multi-Family Residential REITs	60106010
		Single-Family Residential REITs	60106020
		Retail REITs	60107010
		Other Specialized REITs	60108010
		Self-Storage REITs	60108020
		Telecom Tower REITs	60108030
		Timber REITs	60108040
		Data Center REITs	60108050
	Real Estate Management & Development	Diversified Real Estate Activities	60201010
		Real Estate Operating Companies	60201020
		Real Estate Development	60201030
		Real Estate Services	60201040
Shipping	Transportation	Air Freight & Logistics	20301010
		Marine Transportation	20303010
		Rail Transportation	20304010
		Cargo Ground Transportation	20304030
Steel	Materials	Steel	15104050
Transportation	Transportation	Passenger Ground Transportation	20304040
		Airport Services	20305010
		Highways & Railtracks	20305020
		Marine Ports & Services	20305030

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