As investors sharpen their focus on the financial impacts of climate change, they may want to know whether the companies they’re investing in today are aligning with the global goal of keeping warming this century to well below 2 degrees Celsius (2°C) to prevent the worst climate harms.¹

Implied Temperature Rise from MSCI ESG Research is designed to show the temperature alignment of companies and portfolios with global climate targets.

With its forward-looking estimate of company or portfolio emissions, investors can use Implied Temperature Rise to set decarbonization targets and support engagement on climate risk. The metric, which is designed to support reporting for the Task Force on Climate-related Financial Disclosures (TCFD), is part of a platform of analytical tools from MSCI ESG Research that institutional investors leverage to navigate the transition to net-zero at every stage.

**SAMPLE COMPANY**

**IMPLIED TEMPERATURE RISE** 2.1°C

| LAGGING | MISALIGNED | 2°C ALIGNED |

**2°C Trajectory**

| Absolute emissions [Megatons CO₂e] |

- Easy-to-grasp metric to express portfolio alignment with global temperature targets
- Covers companies’ Scope 1, 2 and 3 carbon emissions (may include estimates)
- Available for nearly 10,000 issuers²
- Forward-looking estimate developed by MSCI Climate Risk Center based on recommendations published by the TCFD portfolio alignment team³
- Based on data that can be easily examined and traced, together with analysis of companies’ decarbonization targets
- Supports investors seeking to report to the TCFD
- Supports investors seeking net-zero strategy implementation
- Part of MSCI’s climate scenario-analysis solutions, available via MSCI ESG Manager, MSCI Climate Lab, MSCI Analytics and other platforms
**How Implied Temperature Rise works**

Implied Temperature Rise compares the current and projected greenhouse gas emissions of nearly every publicly listed company across all emissions scopes (based on the company’s track record and stated reduction targets) with its share of the remaining global carbon budget for keeping warming this century well below 2°C. A company projected to emit carbon below budget can be said to “undershoot” the budget; a company projected to exceed the budget “overshoots” it.

Implied Temperature Rise converts the overshoot or undershoot to an implied rise in average global temperatures this century, expressed in degrees Celsius (°C). An implied temperature of 1.5°C, for instance, indicates that a company is projected to remain within its share of a carbon budget that would keep warming this century to 1.5°C. An implied temperature of 2.5°C or 3°C, in contrast, would show that the company’s emissions align with temperatures that keep rising, bringing greater harms.

The portfolio-level Implied Temperature Rise compares the sum of projected greenhouse gas emissions against the sum of carbon budgets for the underlying constituents or holdings. The estimated carbon budget overshoot or undershoot for the portfolio in question converts to a degree of temperature rise.

1. Allocate a 2°C carbon budget
2. Project companies’ future emissions, considering their targets
3. Compare 1 & 2 to measure under/overshoot
4. Convert over/undershoot in degree of Implied Temperature Rise

**Overview of methodology**

**Assess the companies’ carbon budget**
Determine what the emissions budgets of publicly listed companies need to be to align with global temperature goals, based on their greenhouse gas emissions as a share of the global carbon budget.

**Chart companies’ potential future emissions**
Project companies’ carbon emissions through 2070 based on their reported and estimated emissions as well as their stated reduction targets.

**Calculate whether companies overshoot or undershoot their carbon budget**
Compute the excess or shortfall in issuers’ cumulative projected emissions as a share of a remaining global budget for keeping within such key thresholds as 2°C.

**Convert the relative excess or shortfall to an Implied Temperature Rise**
Translate the relative deviation (positive or negative) into a temperature that reflects the climate response to a specific quantity of emissions as if the whole economy had the same carbon budget deviation as the company (or portfolio) in question.

You can download the methodology [here](#).
Create a cohesive net-zero strategy

Path to net-zero emissions. Implied Temperature Rise equips investors to assess the progress of companies, portfolios, funds and benchmarks toward driving down greenhouse gas emissions to net-zero by the middle of this century.

Target-setting and climate risk management. Investors can use Implied Temperature Rise to inform their climate risk management, set evidence-based decarbonization targets and optimize portfolios.

Engagement. Implied Temperature Rise can support dialogue with companies on climate risk.

Client communication. Asset and wealth managers can use Implied Temperature Rise to show clients how investment portfolios align with global climate goals.

Facilitates reporting. Implied Temperature Rise is designed to align with the reporting recommendations by the Task Force on Climate-related Financial Disclosures (TCFD)\(^3\). With its coverage of nearly 10,000 issuers and all greenhouse gas emissions scopes, the tool supports reporting in line with evolving disclosure requirements.

Powering better investment decisions

Innovation
MSCI’s Climate Risk Center is an industry leader in climate change risk analytics, modeling and methodology. Carbon Delta, which MSCI acquired in 2019, has pioneered a series of state-of-the-art models for climate-scenario analysis.

A powerful platform
MSCI Net-Zero Solutions is a powerful platform for building climate-resilient portfolios at every stage, from risk management and benchmark selection to reporting.

Forward-looking
Our solutions consider a range of climate risk and opportunities, based on forward-looking analysis of both transition and physical risks.

The highest-quality data
Industry-leading datasets from MSCI cover more than 10,000 issuers and greater than 95% of global equity, fixed income and real-estate markets.

Decision-useful
Scenario-analysis tools from MSCI assess the impact of climate-related risks and opportunities for each issuer on the valuation of its equity and debt.

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2. The company-level dataset will cover nearly 10,000 publicly listed companies based on the MSCI ACWI Investable Market Index, as of August 2021
4. MSCI uses IPCC (Intergovernmental Panel on Climate Change) guidance to calculate a global 2°C carbon budget: *The IPCC Special Report on Global Warming of 1.5 °C,* sets the remaining global carbon budget for varying temperature rises and probabilities (Table 2.2 at page 108 of the report).
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About MSCI

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