Insights from a 3.2°C market

Turning temperature scores into action

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CDP and WWF are partnering to enable climate action for corporates and financial institutions

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Key findings

Current corporate climate ambitions point to a world with warming levels of 3.2°C

The global equities market, in this report exemplified by the Bloomberg World Large & Mid Cap Index, is aligned with 3.2°C of warming – substantially above the Paris Agreement's goal (of keeping warming levels well below 2°C, aiming for 1.5°C). For financial institutions, this means structural exposure to a transition risk that is currently not priced in across most portfolios.

Widespread target misalignment rules out simple portfolio fixes

"Even for companies with climate targets, the overall temperature score is 2.9°C."

Misalignment is widespread across sectors and regions and is not driven by a small set of outliers. This matters for how investors respond. Improving portfolio alignment requires engagement across the market on the quality and scope of corporate climate targets.

The ambition gap persists, even among companies that have set climate targets

When we remove default scores[1], the market-level mid-term temperature score only marginally improves, to 2.9°C. Improving target coverage is necessary but therefore not sufficient. The level of ambition of existing targets must also improve.

Insufficient Scope 3 emissions targets is the largest and least-addressed cause of misalignment

Insufficient ambition or absent targets for value chain emissions (Scope 3) is the most persistent source of misalignment with the Paris Agreement goal. The Scope 3 temperature score sits above 3.2°C across all time frames, with almost no regional or sectoral variation. Extending target coverage and ambition across Scope 3 emissions is the single highest-leverage intervention available to the market.

Long-term ambition does not translate into better alignment

Market-level temperature scores remain broadly unchanged across short-, mid- and long-term time frames. Long-dated commitments are not translating into lower implied warming levels. Long-term scores should therefore be read as indicators of stated ambition rather than expected outcomes and be used to prioritize engagement and identify where deeper scrutiny is warranted.

1 A company without an emissions reduction target, or that has not reported sufficient data to allow a temperature score to be calculated, is assigned a default score of 3.4°C. This is derived from the Climate Action Tracker (2023) "Policies & Action" scenario, reflecting a business-as-usual pathway for global warming by 2100. See CDP-WWF Temperature Scoring Methodology (2024, p.18).

Call for action

For financial institutions

Set ambitious targets for financed emissions. These are the single largest source of emissions for financial institutions. Use temperature scores to guide ambition and track alignment.

Prioritize engagement. Because misalignment is systemic rather than isolated, direct engagement with portfolio companies on target quality, scope coverage and interim target milestones is the highest-leverage response available.

"The presence of a climate target is not a proxy for alignment."

Look beyond coverage to ambition. The presence of a climate target is an important first step but not a proxy for alignment. Financial institutions should evaluate the temperature implied by existing targets – not just whether targets exist – and use this evaluation to differentiate genuine leaders from portfolio companies making only symbolic commitments.

Push high ambition across all time frames. Global markets are not close to aligning with Paris Agreement goal, but short-term targets are at least less misaligned than long-term ones. Companies that have set short-term targets have the framework in place to go further. The role of financial institutions is to support them to do so.

For non-financial companies

Set targets that are ambitious enough to matter and build in accountability. A target that exists is not the same as a target that aligns. Companies should set climate targets consistent with the Paris Agreement and commit to reviewing them every 5 years, so that ambition keeps pace with climate science and evolving benchmarks.

Pair long-term commitments with credible interim milestones. Market-level insights show that long-dated targets are not currently closing the alignment gap. Long-term net-zero commitments translate into real-world outcomes only when supported by near- and mid-term interim targets that create accountability across the transition timeline, not just at the end.

About this report

Financial flows are expected to align with low-emissions and climate-resilient pathways under Article 2.1(c) of the Paris Agreement. For financial institutions, this creates an immediate analytical and strategic challenge: understanding whether financial portfolios are aligned with the transition under way, and how that alignment shapes risk and opportunity across sectors, regions and business models.

This report analyses temperature scores generated using the open-source CDP–WWF Temperature Scoring Methodology.

The report has a dual purpose:

- To provide a market-level assessment of alignment with the Paris Agreement goal, highlighting where misalignment persists and opportunities exist and where they are most concentrated;
- To support financial institutions in interpreting and applying temperature scores in practice.

In doing so, the report supports the practical application of climate data and their use in decision-making. It helps financial institutions translate corporate ambition into portfolio-level insights, relevant for both real-economy transition outcomes and long-term financial performance.

Info box

CDP–WWF Temperature Scoring Methodology

The CDP–WWF Temperature Scoring Methodology (Version 1.5), released in 2024, uses an implied temperature rise (ITR) approach and translates corporate climate targets into a single metric: a temperature score expressed in °C.

The method links companies' emissions reduction targets to temperature outcomes using benchmarks derived from climate scenarios set out in the Intergovernmental Panel on Climate Change Sixth Assessment Report. These are combined into a warming function that relates annual emissions reduction rates (CAR) to projected temperature increases.

Temperature scores are calculated across emission scopes (Scopes 1, 2 and 3, Scope 1+2 and Scope 1+2+3) and time frames (short, mid and long terms) and can be aggregated from company level to portfolio and value chain levels. Companies that have not set an emissions reduction target or have not reported sufficient data to allow a temperature score to be calculated are assigned a default score of 3.4°C, reflecting a business-as-usual pathway for global warming by 2100.

The temperature scores indicate the level of global warming that a company's climate targets are expected to contribute to.

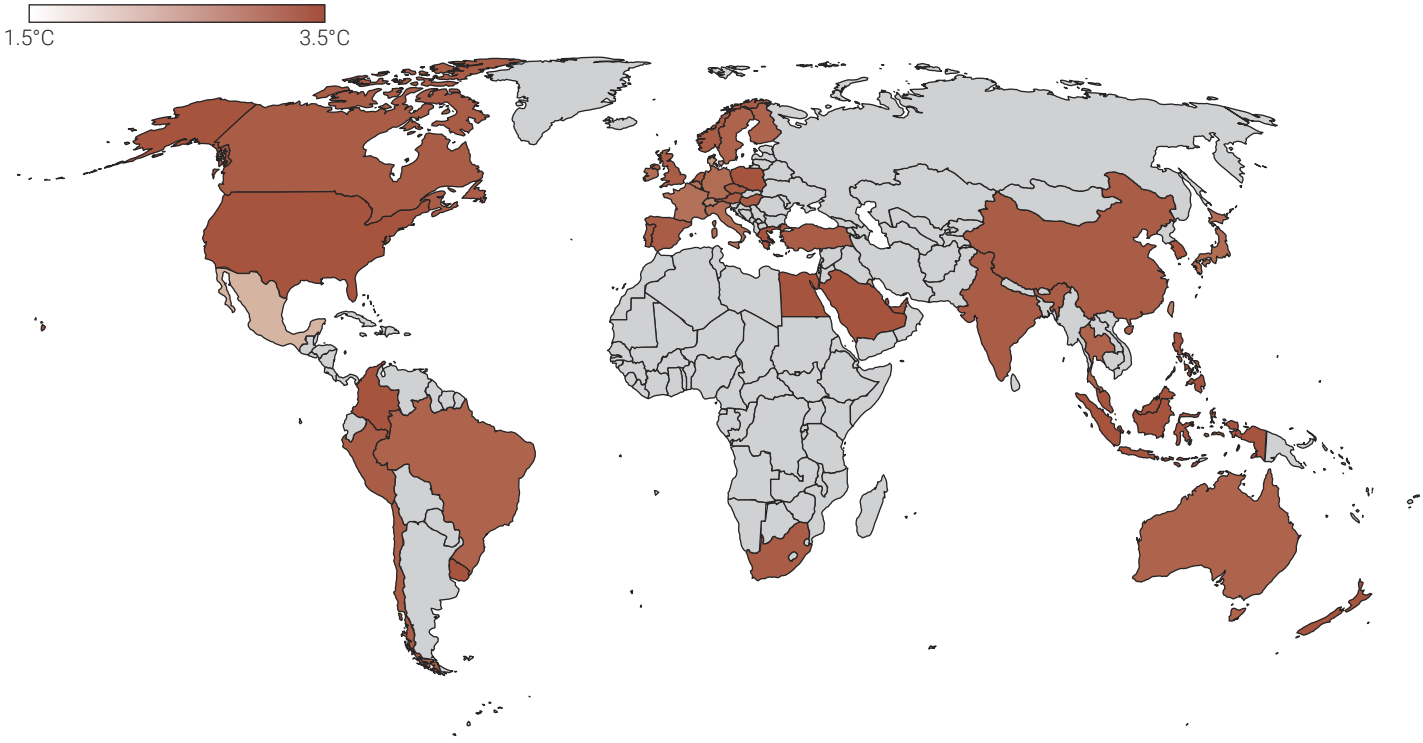
The global equity market is off track

The companies in the Bloomberg World Large & Mid Cap Index (World Index), accounting for ~85% of global equity market capitalization, are currently aligned with a 3.2°C warming level[2]. This indicates substantial misalignment with the temperature goal of the Paris Agreement.

Across both operational and value chain emissions, and across all time frames, aggregated corporate climate targets consistently point to warming levels above 2.9°C, and in most cases above 3°C. This implies that, at an aggregate level, current corporate ambitions are insufficient to achieve alignment with the Paris Agreement goal (see Table 1).

This pattern is broad-based, spanning sectors and regions, rather than being concentrated in a small subsection of the market, pointing to systemic misalignment rather than isolated weaknesses.

Figure 1: Mid-term Scope 1+2+3 temperature scores (in °C) of all companies in World index.



Source: Adapted from 2026 data provided by CDP, Science-based Targets initiative (SBTi), Bloomberg and WWF.
All companies included in the Bloomberg World Large & Mid Cap Index divided by country using country of domicile. Aggregation method: Total Emissions Weighted Temperature Score (TETS).

2 Temperature scores are aggregated using the Total Emissions Weighted Temperature Scores (TETS) method; see CDP–WWF Temperature Scoring Methodology (2024, p.37). Aggregating using Enterprise Value Including Cash (EVIC) or Enterprise Value + Cash Emissions Weighted Temperature Score (ECOTS) still gives an overall temperature score of 3.2°C. Unless otherwise stated, this report uses the TETS method.

Table 1: Temperature scores (in °C) for different emission scopes and time frames

Scope	Temperature score (°C) Short-term	Mid-term	Long-term
Operational emissions (Scope 1+2)	2.9	3.0	3.1
Value chain emissions (Scope 3)	3.2	3.2	3.3
Operational and value chain emissions (Scope 1+2+3)	3.2	3.2	3.2

Source: Adapted from 2026 data provided by CDP, Science-based Targets initiative (SBTi), Bloomberg and WWF.

Two issues driving market misalignment

Issue 1: Too few companies have set targets (coverage gap)

A large proportion of companies have received default scores[3].

This happens when a company has not set an emissions reduction target or when it has not reported sufficient data to allow temperature scores to be calculated.

Removing these default scores from the analysis improves the market alignment, but the effect is modest, and the market remains significantly off track in relation to aligning with the Paris Agreement goal, as we can see in Figure 2.

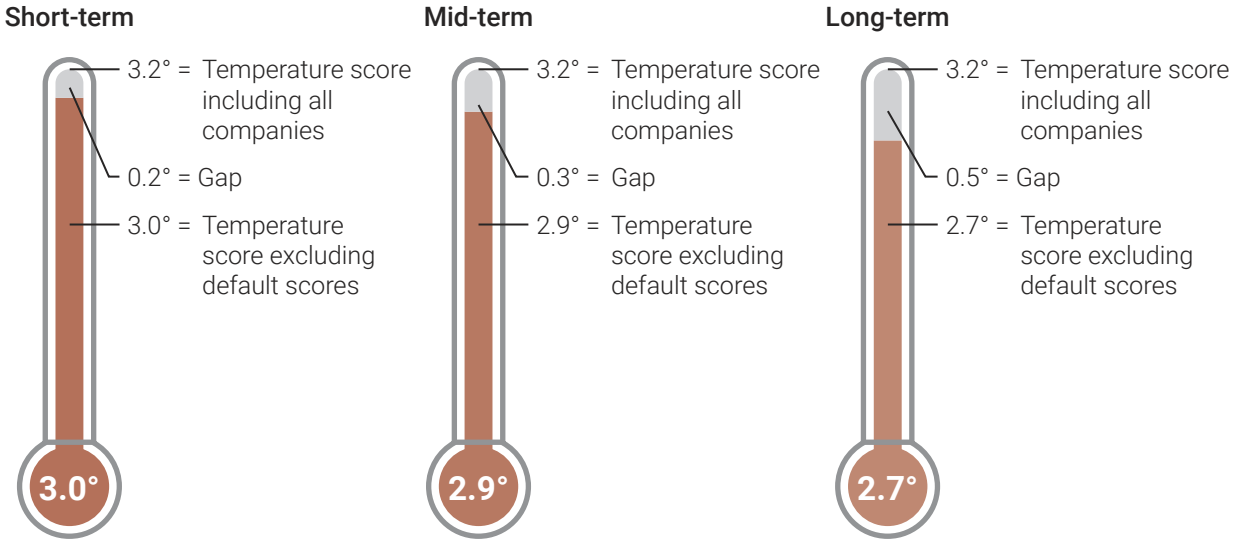
The gap between the full market and the subset of companies with targets increases progressively from the short to the long term, indicating that companies without valid targets are disproportionately contributing to higher long-term warming levels.

This pattern is not uniform across regions. In Africa and parts of Latin America, the implied warming level is largely based on default scores. This indicates that, in these parts of the global market, the temperature score is not the result of insufficiently ambitious targets, but instead the result of the absence of climate targets.

Overall, gaps in target-setting are a meaningful contributor to misalignment, especially in regions and sectors where disclosure and target coverage remain limited.

3 See appendix and the CDP–WWF Temperature Scoring Methodology (pp.18–21) for an explanation of default scores.

Figure 2: Temperature scores (in °C) in for Scope 1+2+3 for all companies in the World Index and companies in the World Index excluding default scores.



Source: Adapted from 2026 data provided by CDP, Science-based Targets initiative (SBTi), Bloomberg and WWF.

Issue 2: Insufficient ambition among target-setters

Current corporate climate ambitions remain below the level required to align with the Paris Agreement goal.

"Climate ambitions are not aligned with the Paris Agreement goal."

At the market level, the temperature score for companies that have set mid-term climate targets is 2.9°C (see Figure 2). This indicates that increasing target coverage alone would not be sufficient to align climate ambitions with the Paris Agreement goal and that the level of ambition embedded in most company targets remains a key constraint on market alignment.

This pattern holds across several sectors when considering targets for both operational and value chain emissions (for the subset of companies that have these targets). In particular, temperature scores are consistently high for sectors such as the Consumer Discretionary, Energy and Financials across regions and time frames.

Together, these findings suggest that both the extent and the strength of target-setting continue to limit market alignment.

Value chain emissions targets as a systemic constraint

While climate targets across both operational and value chain emissions remain misaligned with the Paris Agreement, value chain emissions targets represent a particularly persistent and systemic constraint on market alignment.

Climate targets for operational emissions (Scope 1+2) correspond to a temperature score of 3°C (mid-term). This is significantly above Paris Agreement-aligned levels and is particularly notable given that operational emissions are more directly within companies' control and therefore higher levels of ambition and stronger action should be achievable.

"Misalignment is seen across emission scopes, but particularly value chain emissions."

In comparison, mid-term targets for value chain emissions (Scope 3) correspond with an even higher temperature score: 3.2°C. The score is higher still, at 3.3°C, for the long term (see Table 1).

This pattern of higher temperature scores for Scope 3 targets is observed across sectors and regions, implying that value chain emissions targets are a persistent and systemic concern and a key contributor to overall misalignment.

In several sectors, the difference between temperature scores for operational emissions targets (see Table 2) and value chain emissions targets (see Table 3) is substantial, often significantly larger than the gap observed at the market level. In North America, the temperature score for the Materials and Industrials sectors is 2.4°C and 2.6°C respectively for operational emissions (Scope 1+2), while the temperature scores for value chain emissions (Scope 3) for these sectors are 3.2°C and 3.3°C, respectively. In Europe, the difference between temperature scores for operational and value chain emissions for the Materials sector is even larger than in North America, being close to 1°C (2.4 °C for Scope 1+2 and 3.3°C for Scope 3).

Table 2: Mid-term Scope 1+2 temperature scores (in °C) by sector and region.

	Communications	Consumer Discretionary	Consumer Staples	Energy	Financials	Health Care	Industrials	Materials	Real Estate	Technology	Utilities
APAC	2.6	2.6	2.4	3.0	2.9	2.8	3.0	3.0	3.1	2.5	3.4
Africa	1.6	3.4	2.1		3.0			2.2			
Europe	2.0	2.2	1.9	2.6	2.5	1.9	1.9	2.4	1.6	3.0	2.0
Latin America	1.5	3.0	2.7	2.0	2.4	3.0	3.3	1.9	3.4		2.6
North America	2.3	2.9	2.8	3.3	3.3	2.2	2.6	2.4	2.4	2.2	3.2

Source: Adapted from 2026 data provided by CDP, Science-based Targets initiative (SBTi), Bloomberg and WWF. APAC, Asia-Pacific. Blank cells mark combinations with no company represented in the World Index.

Table 3: Mid-term Scope 3 temperature scores (in °C) by sector and region.

	Communications	Consumer Discretionary	Consumer Staples	Energy	Financials	Health Care	Industrials	Materials	Real Estate	Technology	Utilities
APAC	3.0	3.4	3.1	3.4	3.4	2.7	3.0	3.3	3.0	3.0	3.4
Africa	2.2	3.4	3.3		3.3			3.3			
Europe	2.1	3.2	2.6	3.4	3.0	2.8	3.0	3.3	3.1	2.7	2.5
Latin America	2.9	3.4	3.1	3.4	2.9	3.3	3.1	2.8	3.4		2.5
North America	3.0	3.1	3.2	3.4	3.3	3.3	3.3	3.2	3.2	3.1	3.4

Source: Adapted from 2026 data provided by CDP, Science-based Targets initiative (SBTi), Bloomberg and WWF. APAC, Asia-Pacific. Blank cells mark combinations with no company represented in the World Index.

Tables 2 and 3 show a clear pattern: value chain emissions are persistently misaligned across almost every sector and region, with implied temperatures clustering between 3.0 and 3.4°C. This narrow range means that the sector-level differences visible in operational emissions largely disappear once value chain emissions are included.

Where misalignment is concentrated

Sector realities

Temperature scores are driven by a limited number of high-impact sectors. The Energy and Financials sectors and parts of the Consumer Discretionary sector account for a large share of the market's high implied temperature levels, with the Materials sector also contributing to high temperature scores in several regions (see Table 4).

Table 4: Mid-term Scope 1+2+3 temperature scores (in °C) by sector and region.

	Communications	Consumer Discretionary	Consumer Staples	Energy	Financials	Health Care	Industrials	Materials	Real Estate	Technology	Utilities
APAC	3.0	3.4	3.1	3.3	3.4	2.8	3.0	3.3	3.0	3.0	3.4
Africa	2.3	3.4	3.3		3.3			3.3			
Europe	2.2	3.2	2.6	3.4	3.0	2.9	3.0	3.3	3.1	2.7	2.6
Latin America	2.9	3.4	3.1	3.4	2.9	3.3	3.2	2.8	3.4		2.7
North America	2.9	3.1	3.2	3.4	3.4	3.3	3.3	3.2	3.1	3.1	3.4

Source: Adapted from 2026 data provided by CDP, Science-based Targets initiative (SBTi), Bloomberg and WWF. APAC, Asia-Pacific. Blank cells mark combinations with no company represented in the World Index.

The Energy sector remains structurally misaligned. Within the Energy sector, most subsectors' temperature scores (Scope 1+2+3) cluster at ~3.3–3.4°C in the mid term. The oil and gas segments (e.g. Exploration and Production, Integrated Oils) contribute to this. For these subsectors, misalignment is primarily determined by value chain emissions targets, where the climate targets are far from being aligned with the Paris Agreement goal.

The Materials sector shows regional divergence, with the lack of value chain emissions targets driving outcomes. European subsectors such as Chemicals and Construction Materials have temperature scores for short- and mid-term operational emissions targets that are close to being aligned with the Paris Agreement. However, adding value chain emissions targets shifts most subsectors towards 3°C or more, indicating that temperature scores at the overall sector level are still largely determined by insufficiently ambitious Scope 3 targets.

In contrast, the North America and Asia-Pacific (APAC) regions show consistently high temperature scores across all time frames and emission scopes. This is primarily driven by the Metals and Mining and Chemicals subsectors, reflecting weaker underlying positioning and driven by insufficiently ambitious or incomplete climate targets across a broad set of companies.

The Financials sector shows consistently high temperature scores, regardless of time frames and regions, with outcomes generally clustered above ~3°C.

This reflects insufficient or absent target ambitions for both operational and value chain emissions, which keeps temperature scores elevated across all time frames. This results in a stable pattern of misalignment.

The Consumer Discretionary sector is highly fragmented, with significant variation across subsectors. Some subsectors, such as Apparel and Textiles, are close to being aligned with the Paris Agreement in terms of mid-term operational emissions targets; this is particularly evident in Europe and APAC. This does not hold once value chain emissions targets are included, however, with temperature scores becoming materially higher.

A similar pattern is observed across other subsectors. The Automotive subsector, for instance, is close to being aligned with the Paris Agreement in terms of mid-term targets for Scope 1+2 in both Europe and North America, but temperature scores increase significantly when value chain emissions targets are included.

This reflects a broader sectoral pattern: temperature scores based on operational emissions targets are relatively low, but increase when value chain emissions targets are considered, and are generally higher over longer time frames.

Regional differences

The findings from the analysis are consistent across regions: based on mid-term climate targets, companies listed in the world's major equity markets are aligned with a global temperature increase exceeding ~3°C, far above the 1.5°C goal of the Paris Agreement.

"Europe is only slightly more ambitious than the rest of the world."

As depicted in the heatmaps shown in Tables 2–4, the climate targets of companies in Europe are slightly more ambitious than their counterparts in other regions, averaging at 2.7°C in the short term and 3.1°C in the long term (Scope 1+2+3). However, this difference, for mid-term targets, is modest and concentrated in specific markets. Germany, the UK and Italy remain firmly around 3°C.

North America is the most misaligned region, with climate targets implying a 3.1°C increase in the short term rising to a 3.3°C increase in the long term.

APAC sits between Europe and North America. Interestingly, Japanese and South Korean companies in heavy-emitting sectors have relatively ambitious long-term targets.

Africa and Latin America are disproportionately clustered at or near the 3.4°C upper bound, reflecting the complete absence of any valid climate targets for most companies.

Alignment across time frames

The global alignment outlook does not improve across time frames.

Market alignment covering operational and value chain emissions (Scope 1+2+3) targets are more or less the same across time frames, with the temperature score consistently at 3.2°C from the short to the long term. Across regions and sectors, temperature scores range from approximately 2.0°C to 3.4°C in the short term and from around 2.2°C to 3.4°C in the mid and long terms, with most observations clustering at the higher end.

Temperature scores for operational emissions (Scope 1+2) targets are better than for value chain emissions (Scope 3) targets in the short and mid terms, but this is not sustained in the long term.

"Alignment weakens over longer time frames."

As time frames extend, differences in temperature scores across sectors and regions narrow, with most converging towards similarly high outcomes. This is seen even when default scores are excluded, indicating that the effect is a question not only of target coverage but also of limited and increasingly similar long-term target ambitions across companies. As a result, longer-term targets do not materially differentiate between stronger and weaker performers at market level.

From market temperature to portfolio decisions – the role of temperature scores in practice

“Temperature scores are useful for compliance, but they are even more useful in providing a map for taking action.”

For financial institutions, the key question is how this market-level analysis translates into portfolio-level exposure – which holdings drive alignment, where do gaps and opportunities persist, and how might these evolve over time?

Temperature scores are most powerful when they move investors from observation to action.

In practice, many financial institutions focus on two views: mid-term operational alignment, which shows where companies stand today, and long-term combined alignment (Scope 1+2+3), which reveals structural exposure to transition risk. Together, these considerations reveal mid-term positioning and long-term vulnerability.

Heatmaps, like those used in this report, make patterns in temperature scores clearly visible. Sectoral and regional breakdowns expose what aggregate temperature scores conceal – why the North American Financials sector, with a 3.3°C long-term score, or the Consumer Discretionary sector, with a 3.3°C score, look the way they do, and whether the underlying driver of these scores is genuine misalignment or a data or target coverage gap. This distinction matters. It determines whether the appropriate response is engagement, divestment or simply to collect better data.

Time frames add another dimension. Where mid-term temperature scores look reasonable but long-term scores deteriorate, companies are likely to be front-loading commitments without having credible end-state plans. This is the pattern found by this analysis across most regions and is where targeted engagement can have the greatest leverage.

The same analysis supports portfolio construction. Rather than applying rigid exclusion thresholds that concentrate risk, inflate tracking errors and make the transition of the entire economy harder, investors can identify leaders within each sector and region and tilt exposures accordingly, improving alignment while staying diversified.

Used well, temperature scoring not only provides scores to report for compliance purposes. It – perhaps even more importantly – provides a map for deciding where and how to act.

“Temperature scores support value creation and portfolio resilience.”

Finding the gap between ambition and action

Temperature scores can highlight opportunities by revealing gaps where action is feasible, supporting value creation and portfolio resilience.

Opportunities often emerge when ambitious targets exist for some emission scopes or time frames but are weaker or absent for others. This indicates governance readiness while exposing inconsistencies across the value chain. Such gaps typically reflect incomplete target-setting rather than structural barriers, suggesting that alignment can be improved through more comprehensive and consistent targets.

The European Consumer Discretionary sector illustrates this, with mid-term Scope 1 scores being relatively low, at around 1.9°C, and Scope 2 scores rising to 2.7°C and Scope 3 to 3.2°C.

A clear next step in this case is to strengthen Scope 2 targets through renewable energy procurement, an increasingly cost-efficient option that can also enhance energy security. Companies already addressing direct emissions have demonstrated a capacity to act but have yet to extend this consistently across other material sources.

Closing these gaps can improve operational efficiency and strengthen resilience to transition risks. Temperature scores can help identify these opportunities early – before the market does.

Temperature scores as part of a broader transition framework

Temperature scores are most useful when understood as one part of a broader transition assessment. The CDP–WWF Temperature Scoring Methodology provides a lens through which ambition can be viewed, translating disclosed climate targets into a temperature score (in °C). Corporate assessments can use this alongside complementary data across three interconnected dimensions:

- **Ambition**: the extent to which targets, as reflected in temperature scores, are consistent with climate pathways;
- **Credibility**: whether those targets are supported by robust transition plans, governance and capital allocation;
- **Progress**: whether emissions trends and operational developments are aligned with stated commitments.

Temperature scores in practice: Common questions from investors

"Temperature score insights translate into investment decisions."

Temperature scores support a range of core investment decisions, including:

- Portfolio-level target-setting;
- Monitoring alignment and transition progress;
- Stewardship and engagement prioritization;
- Strategic asset allocation and security selection;
- Assessing transition risk and opportunity.

The following examples illustrate how these applications can be operationalized in practice.

How do I assess portfolio companies when their climate targets vary, are inconsistent or are incomplete?

Corporate climate targets vary widely in scope, structure and time frame, making direct comparisons difficult. Using temperature scores resolves this by translating heterogeneous climate targets into a consistent metric that is comparable across emission scopes and time frames.

Table 5 presents an example portfolio, illustrating the range of targets of the companies that a typical institution might hold.

When these targets are expressed as temperature scores, as in Table 6, the picture becomes clearer, providing a basis for identifying alignment, gaps and priority actions.

Table 5: Sample portfolio showing climate targets for each portfolio company. For illustration only. Figures are hypothetical and do not represent any actual portfolio or company.

Company	Climate targets
Alpha	Reduce absolute Scope 1+2 emissions by 50% by 2033; base year 2019. Reduce absolute Scope 3 emissions by 45% by 2035; base year 2021.
Beta	Reduce Scope 1 emissions per unit of energy by 25% by 2026; base year 2020. Reduce Scope 2 emissions per unit of energy by 60% by 2030; base year 2020.
Gamma	Reduce absolute Scope 1 emissions by 50% by 2040; base year 2022. Reduce Scope 2 emissions by 75% by 2035; base year 2021.
Theta	No climate targets disclosed.
Vega	Reduce emissions from purchased goods and services (Category 3.1) and use of sold products (Category 3.11) by 35% by 2033; base year 2019.

Table 6: Sample portfolio showing temperature scores (in °C) for each portfolio company. For illustration only. Figures are hypothetical and do not represent any actual portfolio or company.

Company	Scope	Short-term	Mid-term	Long-term
Alpha	Scope 1+2	3.4	1.9	3.4
	Scope 3	3.4	3.4	1.8
	Scope 1+2+3	3.4	2.7	2.6
Beta	Scope 1+2	2.0	3.2	3.4
	Scope 3	3.4	3.4	3.4
	Scope 1+2+3	2.9	3.3	3.4
Gamma	Scope 1+2	3.4	3.4	1.9
	Scope 3	3.4	3.4	3.4
	Scope 1+2+3	3.4	3.4	2.2
Theta	Scope 1+2	3.4	3.4	3.4
	Scope 3	3.4	3.4	3.4
	Scope 1+2+3	3.4	3.4	3.4
Vega	Scope 1+2	3.4	3.4	3.4
	Scope 3	3.4	2.1	3.4
	Scope 1+2+3	3.4	2.4	3.4

How can I set a meaningful climate target for my portfolio?

Temperature scores aggregated at the portfolio level provide the baseline from which a credible institutional target can be set. For the example portfolio, this aggregation is shown in Table 7.

The portfolio is materially misaligned across all scopes and time frames, with scores for Scope 3 being the most persistently elevated, consistent with the market-wide finding. From this baseline, an institution can define a target trajectory: what portfolio temperature, across which scopes and time frames, does it commit to reaching, and by when? Disaggregating by scope and time frame makes targets specific enough to be meaningful and granular enough to track.

Table 7: Aggregated temperature scores (in °C) for sample portfolio, using TETS as aggregation method. For illustration only. Figures are hypothetical and do not represent any actual portfolio or company.

	Temperature score (°C)		
Scope	**Short-term**	**Mid-term**	**Long-term**
Scope 1+2	2.9	3.3	3.2
Scope 3	3.4	3.2	3.2
Scope 1+2+3	3.2	3.2	3.2

Table 8: Temperature scores (in °C) for sample portfolio company Gamma. For illustration only. Figures are hypothetical and do not represent any actual portfolio or company.

	Gamma temperature score (°C)		
Scope	**Short-term**	**Mid-term**	**Long-term**
Scope 1+2	3.4	3.4	1.9
Scope 3	3.4	3.4	3.4
Scope 1+2+3	3.4	3.4	2.2

How do I understand how my portfolio companies approach their transition over time?

Comparing temperature scores across time frames reveals how a company's ambition is structured. The key patterns to identify are whether ambition is **front-loaded**, with stronger short-term commitments; **back-loaded**, with ambition concentrated in long-term targets; or **incomplete**, with key scopes or time frames not yet covered.

Company Gamma illustrates the case of back-loaded ambition (Table 8). Gamma's long-term operational target (Scope 1+2) implies a temperature score of 1.9°C, but, with short- and mid-term scores at 3.4°C, there is no defined pathway for the next decade. The complete absence of Scope 3 targets (see Table 5) compounds this: a material share of Gamma's total emissions profile sits entirely outside its transition strategy. For an investor, this would give rise to legitimate questions about delivery credibility and means that engagement on interim milestones and Scope 3 coverage would be well founded and could potentially have a high impact.

How do I prioritize engagement for greatest impact?

The highest-priority candidates for engagement typically combine high temperature scores, significant portfolio weight, absent or incomplete target coverage, and an ownership level that gives the institution credible standing to act.

Company Theta meets all of these criteria.

Company	Ownership	Portfolio weight
Theta	6.4%	33%

Adapted from Table A1 (full table in Appendix). For illustration only.

With no targets disclosed (see Table 5), Theta carries a 3.4°C default score across every scope and time frame. Its 33% portfolio weight makes it the single largest contributor to portfolio misalignment, and the institution's 6.4% ownership stake gives it genuine grounds for direct engagement.

How can I improve portfolio alignment over time?

As shown in Table 7, aggregated temperature scores in the portfolio are above 2°C across all time frames. This demonstrates clear misalignment with the Paris Agreement. Improving climate targets in individual companies that make a large contribution to the portfolio, as discussed above, can materially affect portfolio

Table 9: Temperature scores (in °C) for sample portfolio company Theta following engagement on setting ambitious targets. For illustration only. Figures are hypothetical and do not represent any actual portfolio or company.

	Theta temperature scores (°C)		
Scope	**Short-term**	**Mid-term**	**Long-term**
Scope 1+2	2.1	1.7	1.5
Scope 3	2.2	2.0	1.5
Scope 1+2+3	2.1	1.8	1.5

Table 10: Changes in temperature scores (in °C) for sample portfolio following company-level engagement on target ambitions. For illustration only. Figures are hypothetical and do not represent any actual portfolio or company.

	Portfolio change in temperature score (°C)		
Scope	**Short-term**	**Mid-term**	**Long-term**
Scope 1+2	−0.4	−0.5	−0.6
Scope 3	−0.2	−0.2	−0.2
Scope 1+2+3	−0.3	−0.4	−0.6

alignment. For example, Table 9 shows the effects on temperature scores of engagement that leads Theta to set ambitious targets across all scopes and time frames.

As shown in Table 10, the portfolio-level effect of company-level engagement is material.

A single company of a portfolio moving from having no targets to having ambitious ones produces a notable reduction in portfolio-level implied warming levels across every scope and time frame. The WWF ITR-tool supports this “what if” analysis directly, allowing institutions to model the portfolio-level impact of individual company improvements before committing engagement resources.

How do I assess where transition-related risks are concentrated in my portfolio?

Transition-related risks arise where visibility on a company’s expected emissions trajectory is limited or where its ambition is insufficient. This is typically the case when targets are absent, delayed, insufficiently ambitious or incomplete in scope coverage. Where this is the case, it becomes difficult to assess how companies will respond to transition drivers such as tightening regulation, technological change and shifting market expectations.

Misalignment across a portfolio translates into institution-level exposure to stranded asset repricing, regulatory tightening and the risks of holding positions that are structurally misaligned with the transition. With a market aligned with warming levels of 3.2°C (see Table 1), this type of exposure is currently widespread. Temperature scores make these risks legible, identifying where misalignment is concentrated at the portfolio level and revealing the specific drivers of misalignment at the company level.

The example portfolio illustrates the range of risk profiles this can produce (see Appendix, Table A1, for full details).

Company	Sector	Region	Key issue
Theta	Industrials	North America	No targets
Gamma	Materials	North America	No interim or Scope 3 targets
Beta	Energy	Europe	No Scope 3 targets

Adapted from Table A1 (full table in Appendix) For illustration only.

The portfolio company Theta carries the most acute risk: with no climate targets disclosed, there is no defined emissions pathway and no basis for assessing how the company will respond to transition pressures. Gamma and Beta present a subtler but equally important problem: incomplete scope coverage means that material portions of their emissions profiles are not captured in their transition strategies, which can lead to a systematic underestimation of the scale and timing of the reductions required.

Taken together, these three companies represent different expressions of the same underlying issue: insufficient visibility on transition trajectory. For an institution holding all three, the aggregate effect on portfolio alignment and exposure to transition-related risk is material and cumulative.

How do I identify transition-aligned companies and opportunities?

Using temperature scores comparatively, benchmarking a company against its sector and regional peers, can identify companies that are better positioned for the transition and where that positioning creates a basis for capital allocation and targeted engagement.

The sample portfolio company Alpha, in the European Technology sector, exemplifies this (Table 11).

For comparison, Table 12 shows the market-level scores for the European Technology sector.

Alpha outperforms the sector on mid-term Scope 1+2 (1.9°C vs 3.0°C) and long-term Scope 3 (1.8°C vs 2.9°C) temperature scores, but underperforms in the short term, suggesting short-term targets lag behind the sector despite the company's

Table 11: Temperature scores (in °C) for sample portfolio company Alpha. For illustration only. Figures are hypothetical and do not represent any actual portfolio or company.

Company	Region	Sector	Scope	Short-term (°C)	Mid-term (°C)	Long-term (°C)
Alpha	Europe	Technology	Scope 1+2	3.4	1.9	3.4
			Scope 3	3.4	3.4	1.8
			Scope 1+2+3	3.4	2.7	2.6

Table 12: Temperature scores (in °C) for the Technology sector in the European region in the World Index.

Sector	Scope	Short-term (°C)	Mid-term (°C)	Long-term (°C)
Technology	Scope 1+2	2.3	3.0	3.3
	Scope 3	2.6	2.7	2.9
	Scope 1+2+3	2.5	2.7	2.9

Source: Adapted from 2026 data provided by CDP, Science-based Targets initiative (SBTi), Bloomberg and WWF.

strong longer-term positioning. Therefore, Alpha has existing ambition in its mid-term Scope 1+2 target, and its long-term Scope 3 target indicates that progress is likely, but further improvements in short-term targets and broader scope coverage could materially strengthen alignment. This creates an opportunity to link future capital allocation to achieving more comprehensive and consistent targets, supporting improved alignment.

The open-source WWF ITR-tool and CDP's Net-Zero Alignment Dataset, detailed in the following sections, can support analysis to highlight the instances exemplified above.

Using temperature scores within a broader transition assessment framework

CDP's Net-Zero Alignment Dataset (NZAD) shows how CDP–WWF temperature scores can be enhanced with complementary insights to gain an understanding of company alignment and inform portfolio decision-making. NZAD integrates the three critical dimensions mentioned previously:

- **Forward-looking temperature scores**, using the CDP–WWF methodology to capture the ambition of corporate climate targets;
- **Credibility indicators**, to assess the robustness of transition plan disclosures;
- **Performance and trend data**, to reflect recent emissions trajectories and real-world progress.

By combining these elements, NZAD goes beyond a single metric to deliver a holistic, 360-degree view of company positioning, linking ambition to credibility and actual delivery.

This integrated approach is particularly valuable for investors and stakeholders looking to differentiate between companies that may appear similar at first glance. For example, one company may demonstrate high ambition, but lack credible plans or evidence of delivery, while another may show consistent emissions reductions, but have less ambitious long-term targets.

Through NZAD, these distinctions become visible, enabling users to identify where ambition, credibility and performance are aligned and where gaps remain, by transforming complex climate data into a coherent, actionable framework that supports better investment decisions, more targeted engagement and stronger accountability.

The WWF ITR-tool driving the analysis

The analysis in this report was conducted using the WWF ITR-tool – WWF's open-source tool for implementing the CDP–WWF Temperature Scoring Methodology. It was built to make temperature-based portfolio and value chain analysis part of the daily workflow. By being data agnostic, it can complement other data sources such as CDP and the Science-based Targets initiative (SBTi).

The tool can handle a full workflow: it can calculate temperature scores, aggregate them across portfolios, sectors and regions, and generate heatmaps and breakdowns like those used throughout this report. It also supports engagement prioritization, "what if" analysis and target-gap assessment – turning temperature scores into actionable insights.

For institutional users, the tool can run locally on your own hardware, meeting the data security and privacy requirements common across the financial sector. An updated version is currently in development and is expected to be released later this year, with a focus on increased accessibility and usability.

Find out more at www.panda.org/itr.

Appendix

Example portfolio

Table A1: Sample portfolio. For illustration only. Figures are hypothetical and do not represent any actual portfolio or company.

			Percentage of portfolio emissions/ temperature score contribution			
Company	**Region**	**Sector**	**Scope 1+2**	**Scope 3**	**Ownership**	**Climate targets**
Alpha	Europe	Technology	11%	11%	6.7%	Reduce absolute Scope 1+2 emissions by 50% by 2033; base year 2019.
						Reduce absolute Scope 3 emissions by 45% by 2035; base year 2021.
Beta	Europe	Energy	37%	49%	0.6%	Reduce Scope 1 emissions per unit of energy by 25% by 2026; base year 2020.
						Reduce Scope 2 emissions per unit of energy by 60% by 2030; base year 2020.
Gamma	North America	Materials	14%	9%	0.5%	Reduce absolute Scope 1 emissions by 50% by 2040; base year 2022.
						Reduce Scope 2 emissions by 75% by 2035; base year 2021.
Theta	North America	Industrials	33%	21%	6.4%	No climate targets disclosed.
Vega	Africa	Consumer Discretionary	5%	10%	4%	Reduce emissions from purchased goods and services (Category 3.1) and use of sold products (Category 3.11) by 35% by 2033; base year 2019.

Temperature score heatmaps

Short-term temperature scores

Table A2: Temperature scores (in °C) for short-term Scope 1+2 climate targets.

Scope 1+2

	APAC	Africa	Europe	Latin America	North America
Communications	2.5	1.5	1.6	1.5	2.0
Consumer Discretionary	2.6	3.4	2.2	3.0	2.8
Consumer Staples	2.4	2.0	1.9	2.6	1.9
Energy	2.9		2.5	1.9	3.3
Financials	2.9	2.9	2.4	2.3	3.3
Health Care	2.8		1.7	3.0	2.1
Industrials	2.9		1.7	3.3	2.5
Materials	3.0	2.1	2.3	1.9	2.5
Real Estate	3.1		1.6	3.4	2.4
Technology	2.5		2.3		2.2
Utilities	3.3		1.9	2.6	3.2

Source: Adapted from 2026 data provided by CDP, Science-based Targets initiative (SBTi), Bloomberg and WWF. APAC, Asia-Pacific. Blank cells mark combinations with no company represented in the World Index.

Table A3: Temperature scores (in °C) for short-term Scope 3 climate targets.

Scope 3

	APAC	Africa	Europe	Latin America	North America
Communications	3.0	2.2	2.1	2.9	3.0
Consumer Discretionary	3.4	3.4	3.2	3.4	3.1
Consumer Staples	3.1	3.3	2.6	3.1	3.2
Energy	3.4		3.4	3.4	3.4
Financials	3.4	3.3	3.0	2.9	3.3
Health Care	2.7		2.8	3.3	3.3
Industrials	3.0		3.0	3.1	3.3
Materials	3.3	3.3	3.3	2.8	3.2
Real Estate	3.0		3.1	3.4	3.2
Technology	3.0		2.6		3.1
Utilities	3.4		2.5	2.5	3.4

Source: Adapted from 2026 data provided by CDP, Science-based Targets initiative (SBTi), Bloomberg and WWF. APAC, Asia-Pacific. Blank cells mark combinations with no company represented in the World Index.

Mid-term temperature scores

Table A4: Temperature scores (in °C) for mid-term Scope 1+2 climate targets.

Scope 1+2

	APAC	Africa	Europe	Latin America	North America
Communications	2.6	1.6	2.0	1.5	2.3
Consumer Discretionary	2.6	3.4	2.2	3.0	2.9
Consumer Staples	2.4	2.1	1.9	2.7	2.8
Energy	3.0		2.6	2.0	3.3
Financials	2.9	3.0	2.5	2.4	3.3
Health Care	2.8		1.9	3.0	2.2
Industrials	3.0		1.9	3.3	2.6
Materials	3.0	2.2	2.4	1.9	2.4
Real Estate	3.1		1.6	3.4	2.4
Technology	2.5		3.0		2.2
Utilities	3.4		2.0	2.6	3.2

Source: Adapted from 2026 data provided by CDP, Science-based Targets initiative (SBTi), Bloomberg and WWF. APAC, Asia-Pacific. Blank cells mark combinations with no company represented in the World Index.

Table A5: Temperature scores (in °C) for mid-term Scope 3 climate targets.

Scope 3

	APAC	Africa	Europe	Latin America	North America
Communications	3.0	2.2	2.1	2.9	3.0
Consumer Discretionary	3.4	3.4	3.2	3.4	3.1
Consumer Staples	3.1	3.3	2.6	3.1	3.2
Energy	3.4		3.4	3.4	3.4
Financials	3.4	3.3	3.0	2.9	3.3
Health Care	2.7		2.8	3.3	3.3
Industrials	3.0		3.0	3.1	3.3
Materials	3.3	3.3	3.3	2.8	3.2
Real Estate	3.0		3.1	3.4	3.2
Technology	3.0		2.7		3.1
Utilities	3.4		2.5	2.5	3.4

Source: Adapted from 2026 data provided by CDP, Science-based Targets initiative (SBTi), Bloomberg and WWF. APAC, Asia-Pacific. Blank cells mark combinations with no company represented in the World Index.

Long-term temperature scores

Table A6: Temperature scores (in °C) for long-term Scope 1+2 climate targets.

Scope 1+2

	APAC	Africa	Europe	Latin America	North America
Communications	2.9	3.4	2.5	1.6	3.2
Consumer Discretionary	2.9	3.4	3.2	3.4	3.4
Consumer Staples	2.9	3.4	2.5	3.4	3.2
Energy	2.9		2.5	3.4	3.3
Financials	2.9	2.9	3.3	3.4	3.4
Health Care	3.1		2.9	1.5	3.0
Industrials	3.2		2.6	3.4	2.9
Materials	3.1	3.0	2.9	2.5	3.2
Real Estate	3.3		3.4	3.4	3.3
Technology	2.6		3.3		2.3
Utilities	3.2		2.3	2.7	3.3

Source: Adapted from 2026 data provided by CDP, Science-based Targets initiative (SBTi), Bloomberg and WWF. APAC, Asia-Pacific. Blank cells mark combinations with no company represented in the World Index.

Table A7: Temperature scores (in °C) for long-term Scope 3 climate targets.

Scope 3

	APAC	Africa	Europe	Latin America	North America
Communications	2.4	3.4	2.7	2.9	3.3
Consumer Discretionary	3.2	3.4	3.3	3.4	3.4
Consumer Staples	3.2	3.4	3.0	3.4	3.3
Energy	3.2		3.4	3.4	3.4
Financials	3.4	3.1	3.3	3.4	3.4
Health Care	3.2		3.0	3.0	3.2
Industrials	2.9		3.1	3.4	3.4
Materials	3.1	3.4	3.3	3.4	3.4
Real Estate	2.9		3.3	3.4	3.2
Technology	2.9		2.9		3.2
Utilities	3.4		2.7	2.6	3.4

Source: Adapted from 2026 data provided by CDP, Science-based Targets initiative (SBTi), Bloomberg and WWF. APAC, Asia-Pacific. Blank cells mark combinations with no company represented in the World Index.

How was this analysis carried out?

This analysis covers the 2,362 members of the Bloomberg World Large & Mid Cap Index, representing ~85% of global equity market capitalization. We used the CDP–WWF Temperature Scoring Methodology and data from CDP (NZAD), SBTi and Bloomberg. To complement CDP's NZAD, some temperature scores were calculated using the open-source WWF ITR-tool. The latter was also used for all aggregations. For each company, we produced 15 temperature scores – one per combination of emission scope and time horizon.

We used the Total Emissions Weighted Temperature Score (TETS) aggregation method, which weights companies by their current greenhouse gas emissions rather than using a market valuation-related denominator, to better reflect their contribution to global warming.

To avoid double-counting emissions from companies with multiple share classes, our TETS analysis consolidated to a list of 1,818 unique companies. Companies for which climate ambition was unknown were excluded, giving us a coverage level of just over 90% of the World Index by market capitalization.

Where a company had not set a target or available data were not sufficient for us to calculate a target, we applied a default score of 3.4°C. This was in line with the Climate Action Tracker's "Policies & action" scenario, representing a business-as-usual scenario under existing regulation[4].

Default scores are an expected feature of such a dataset, not a flaw. A company may have strong short-term targets but no long-term ones, resulting in default scores for the corresponding combinations of time frame and scope.

The default score distribution is uneven. Short- and mid-term Scope 1, Scope 2 and Scope 1+2 scores have the lowest default score rates, with around 50% of scores being non-default, that is, based on targets that had been set and could be converted into temperature scores. This largely reflects the wave of 2030 commitments made in recent years. Scope 3 is the weakest area, with only around 26% of scores being non-default. Long-term scores are weakest of all, with only 16–22% of scores being non-default. Of the 27,270 individual temperature scores calculated for the 1,818 unique companies, 64% of the temperature scores are default scores.

What are temperature scores?

The temperature score is a metric from the CDP–WWF Temperature Scoring Methodology. It shows what a **company's climate targets** imply in terms of global warming by 2100 (in °C). This is also sometimes referred to as implied temperature rise (ITR).

4 For an explanation of default scores, see the CDP–WWF Temperature Scoring Methodology (2024, p.18) and Climate Action Tracker (2023): Warming Projections Global Update.

A **high temperature score** means that:

- The target(s) that are set are not ambitious enough (e.g. emissions reduction rate targets are too low or coverage is incomplete); or
- The company has not set targets for certain types of emissions or time frames (leading to a default score being given; see above).

A **lower temperature score** indicates comprehensive targets over the assessed time horizons.

To improve a temperature score, companies need to set targets that both are **ambitious enough and cover all relevant emissions**.

What is being assessed?

Climate targets and their level of ambition.

1. For different emission types:
   - **Scope 1**: direct emissions from companies' operations;
   - **Scope 2**: indirect emissions from purchased energy;
   - **Scope 3**: emissions from across the value chain (upstream and downstream).

   In this report, Scope 1+2 emissions are **operational emissions** and Scope 3 emissions are **value chain emissions**.

2. For different time frames:
   - **Short-term**: up to 5 years;
   - **Mid-term**: 5–10 years;
   - **Long-term**: more than 10 years.

   Please refer to the CDP–WWF Temperature Scoring Methodology for a full explanation of the methodology used.

About WWF

WWF is one of the world's largest and most respected independent conservation organizations, with over six million supporters and a global network active in more than 100 countries. WWF's mission is to stop the degradation of the planet's natural environment and to build a future in which humans live in harmony with nature, by conserving the world's biological diversity, ensuring that the use of renewable natural resources is sustainable, and promoting the reduction of pollution and wasteful consumption. Find out more at panda.org.

About CDP

CDP is a global non-profit that runs the world's only independent environmental disclosure system. As the founder of environmental reporting, we believe in transparency and the power of data to drive change. Partnering with leaders in enterprise, capital, policy and science, we surface the information needed to enable Earth-positive decisions. We helped more than 22,100 companies and over 1,000 cities, states and regions disclose their environmental impacts in 2025. Financial institutions with more than a quarter of the world's institutional assets use CDP data to help inform investment and lending decisions. Aligned with the ISSB's climate standard, IFRS S2, as its foundational baseline, CDP integrates best-practice reporting standards and frameworks in one place. Our team is truly global, united by our shared desire to build a world where people, planet and profit are truly balanced. Visit cdp.net or follow us @CDP to find out more.