

Investment viewpoint

Target net zero: high conviction with low tracking error

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Navigating the climate transition

The transition to net zero is ultimately the only way to combat global warming. In order to limit the global temperature rise to no more than 1.5°C, as per the Paris Agreement, global CO₂ emissions must reach net zero by 2050, and must approximately be cut in half as soon as 2030.

Given the scale of this transition, investors and regulators need to work together to ensure a smooth transition of the global economy to net zero. This process has already started. Regulators across the world have been introducing taxes and quotas on carbon emissions, with 65 carbon pricing regimes already in effect around the world.¹ Investors and regulators alike are also putting pressure on companies to set explicit targets for emissions reductions. Portfolio managers have started incorporating climate considerations into their allocation processes to reduce transitional risks but also to gain exposure to potential upside opportunities.

A straightforward or lazy way to align an equity portfolio with the climate transition is to skew its allocation towards low-emitting companies. Such a solution mechanically reduces the carbon emissions per dollar invested, which translates into lower risk associated with the climate transition. However, such a strategy may hinder rather than promote the climate transition, as it fails to aid the transition of companies in carbon intensive sectors where many of the most climate-relevant solutions must ultimately be found.

Instead of avoiding emissions, an alternative approach seeks to ensure that emissions are appropriately managed and fall in line with the objectives of the Paris Agreement. Here too, however, investors must be cautious not to end up in the same trap of merely excluding any company that is still carbon-intensive today.

One option, for instance, is to pursue portfolio-level decarbonisation, using one of the EU Commission's climate-aligned or Paris-aligned benchmarks. These benchmarks require emissions footprints to be reduced by a fixed rate every year. Indirectly, this approach may encourage some companies to accelerate their decarbonisation efforts to avoid being excluded from investors' portfolios. Implemented at a portfolio level, however, annual reductions in footprint are likely to result from a progressive rebalancing to lower-carbon subindustries, or from increasing exposure to companies that have successfully decarbonised after the fact. Fundamentally, this solution is still essentially backwards-looking, failing to consider which companies are best prepared to deliver emissions reductions going forward.

Dr Alexey Medvedev
Portfolio Manager,
Systematic Equities

Dr Thomas Hohne-Sparborth
Head of Sustainability Research

¹ [Carbon Pricing Dashboard | Up-to-date overview of carbon pricing initiatives \(worldbank.org\)](#).

In contrast, LOIM's Target Net Zero approach (TNZ) is based on a forward-looking assessment of companies' commitments to decarbonise. By assessing the ambition and credibility of such commitments and comparing this to the industry-specific rates of decarbonisation that must be achieved, we identify the leaders and laggards of the climate transition, and reallocate capital accordingly. By rewarding leaders and disinvesting from laggards, we seek to both accelerate the climate transition and benefit from relative opportunities.²

In this note, we outline the philosophy behind our systematic approach to TNZ and argue that low tracking error solutions are useful vehicles to benefit from climate transition.

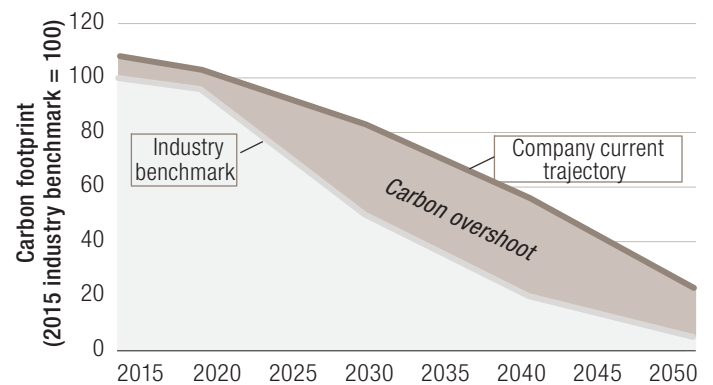
Identifying leaders and laggards

Most carbon emissions across the global economy are created by a relatively select number of economic activities. Each industry or economic activity faces unique challenges and opportunities, requiring a granular analysis, and recognition of the varying pace at which individual sectors can decarbonise. Among high emitting sectors, for instance, we need to distinguish those that are relatively easy to decarbonise due to the availability of alternative technologies (automobile industry³) and "hard-to-abate" ones such as building materials.

In this analysis, it is important to focus on the absolute level of emissions rather than the carbon efficiency or intensity⁴ of sectors and companies. The reduction in global emissions is only partially a function of improved carbon efficiency – with the realignment of business models to lower-volume but higher-value and more circular solutions being a more important part of the equation.

Leveraging these insights, our dedicated sustainability research team draw on existing climate models that also underpin the work of the International Panel on Climate Change (IPCC), to define the specific decarbonisation trajectories that individual companies must achieve to be aligned to a range of global warming scenarios. Covering several thousand companies, our analysis allows us to determine both the rate of reduction needed across the industry as a whole and the extent to which an individual company is lagging behind or in the lead.

EXHIBIT 1. CARBON OVERSHOOT: AN ILLUSTRATION



Source: LOIM. For illustrative purposes only.

For a global warming scenario, corresponding to a 2°C temperature rise as an example, we assess whether a company's cumulative emissions are likely to overshoot its 2°C carbon budget. Where a company's carbon overshoot is positive, it is indicative of alignment to higher levels of warming. Exhibit 1 provides an illustration of how the company's carbon overshoot is computed: it is equal to the difference between projected emissions and the industry-related budget. With the industry benchmark being dependent on the warming scenario, the carbon overshoot will vary as well.

This analysis can be applied at the level of individual portfolio constituents, or on the level of the portfolio as a whole. The carbon overshoot at a portfolio level is equal to the sum of all investee companies' overshoots attributable to the investor.⁵ The portfolio can be characterised by the implied temperature rise – the temperature rise for which the portfolio carbon overshoot is zero. For example, the implied temperature rise exceeding 2°C means that the portfolio is not aligned to 2°C warming scenario.

1.5°C temperature rise? Not yet...

The objective of our TNZ solution is to provide a more climate-aligned alternative to the market index. To achieve this we first define a target in terms of the implied temperature rise, and then look for a portfolio that achieves this target⁶ in the most efficient way.⁷

² A more detailed discussion is provided in ["Designing temperature alignment metrics to invest in net zero: an empirical illustration of best practices"](#).

³ With electric vehicle technology being now well developed, the transition to zero emissions is under way.

⁴ Carbon intensity of a company is the ratio of its carbon emissions to its revenues.

⁵ The emission of a portfolio position is equal to the emission of the underlying company owned in the portfolio. The ownership ratio is equal to the market value of this position divided by the enterprise value.

⁶ Zero carbon overshoot corresponding to the target temperature rise.

⁷ In the absence of views on stocks expected returns, we minimise the tracking error volatility.

Exhibit 2 shows an example of model portfolios built from the MSCI World Index with implied temperature rise targets ranging from 2.5°C to 1.5°C.⁸ Improving the temperature alignment can generally be achieved through two broad strategies. Firstly, by tilting allocations to the carbon leaders, and away from the carbon laggards within each activity. Secondly, by tilting allocations to industries that are already moving quicker towards alignment, which often includes lower carbon sectors, merely due to the lower cost of the transition that these sectors face.

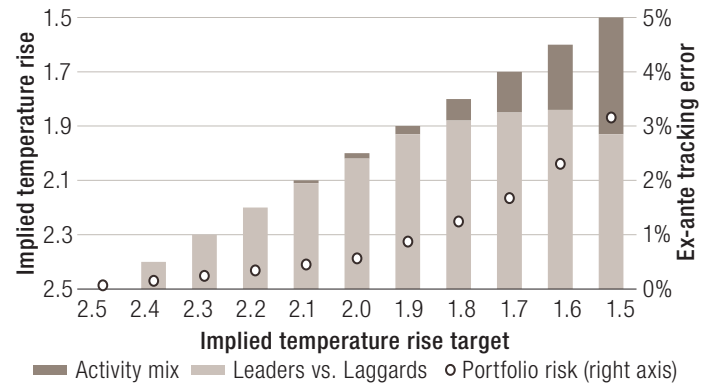
Exhibit 2 shows that while it is possible to create a 1.5°C strategy today, it involves a significant bias in terms of the industries and economic activities invested in. While succeeding in nominally improving alignment, this raises the question of whether such a strategy is well-aligned to the transition, if it shies away from those sectors that are in a process of transition, and those that, with the help of investors, need to transition further.

In our TNZ strategy, we favour an approach that maximises real carbon reductions by favouring carbon leaders at the expense of carbon laggards within similar activities. This approach allows us to align the portfolio just below 2.0°C today, and keep its tracking error low due to the limited impact on the activity mix of the benchmark. As the leaders deliver on their decarbonisation commitments and set the stage for others to follow suit, the alignment of the emissions of the portfolio's constituents is expected to improve further. Ultimately, our TNZ strategies are aiming to progressively achieve 1.5°C alignment, while staying within their low tracking error mandates.

Conclusion

At LOIM, we aim to identify and invest in the leaders of the climate transition within each industry, while reducing exposure to its laggards. Rather than artificially limiting our exposure to only the low-carbon subset of our economy, our approach allows us to address and engage with the most climate-relevant sectors of the economy. In this note we demonstrated that this philosophy can be consistently implemented with low tracking error portfolios. Such portfolios do not distort the activity mix of the benchmark and allow us to fully benefit from the opportunities in the race to net zero.

EXHIBIT 2. ATTRIBUTION OF THE REDUCTION IN THE IMPLIED TEMPERATURE RISE IN TNZ PORTFOLIOS



For illustration purposes only. The graph provides the attribution of the implied temperature reduction of TNZ portfolios with the MSCI World index as a benchmark. Each portfolio is the minimal tracking error portfolio with zero carbon overshoot corresponding to the implied target temperature rise target. We defined three types of activities depending on carbon emissions (High, Moderate and Low). High (Low) carbon activities are top (bottom) GICS4 industries in terms of contributors to the emissions of the MSCI World Index with the cumulative index weight of 25%. Source: LOIM.

⁸ The implied temperature rise of the MSCI World Index is above 2.5°C.

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