Net Zero Investing:

Columbia Threadneedle Investments Approach

January 2025

At Columbia Threadneedle Investments, we use our Responsible Investment expertise to provide ESG funds and approaches that meet the varying needs of our clients. These include our Net Zero methodologies, developed over a range of asset classes.

This paper focuses on our approach in listed equities and corporate bonds, and sets out the methodological choices we have made. We also have methodologies in place or under development for other asset classes.

Principles underpinning our net zero approach

We have identified three principles to guide our approach to developing Net Zero methodologies, which have helped with some of the choices we have made along the way.

*Net zero refers to a state in which the greenhouse gases going into the atmosphere are balanced by the removal out of the atmosphere.
Source: As of July 2022 https://netzeroclimate.org/what-is-net-zero/

Three principles underpinning our net zero approach

1 Focus on real-world emissions reductions

We know that we can cut a portfolio's carbon intensity dramatically by selling companies in highly energy-intensive sectors like electric utilities and industrials, and replacing these with companies in lower-emissions industries. But such portfolio changes alone make little difference in the real world. Through engagement we can encourage companies within our Net Zero portfolios to develop their energy transition and climate strategies – and as their emissions fall, so too will the carbon content of these portfolios. If companies fail to respond, and remain fundamentally misaligned with a low-carbon future, we may need to re-consider our investments in them within these funds.

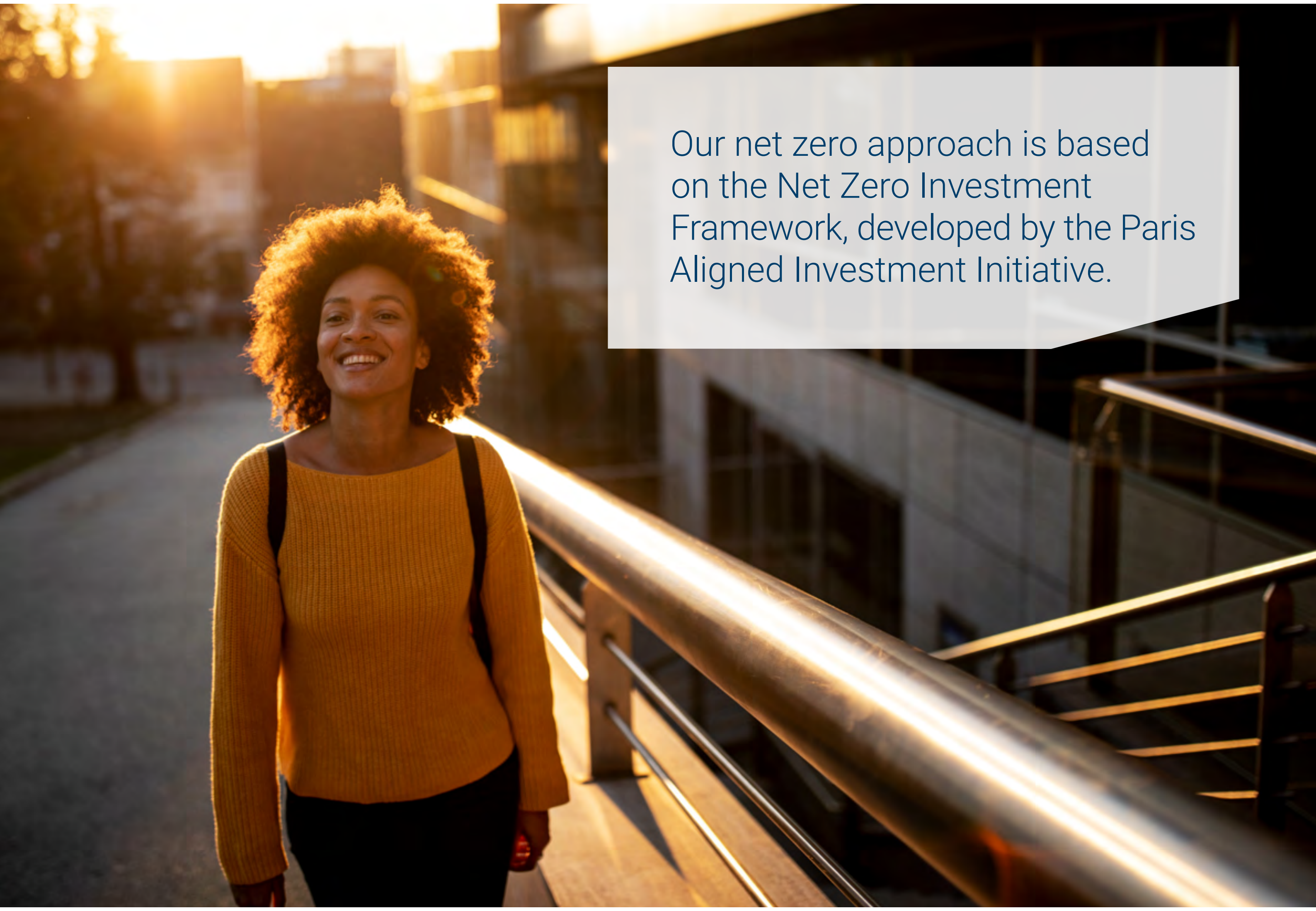
2 Work in partnership with clients

As asset managers, our fundamental responsibility is to meet our clients' current and future investment needs. Our aim is to work in partnership with our clients, providing education on what the low carbon transition means when applied to portfolios. Our methodology is applied at a fund or mandate level, aligned with it's underlying ESG approach, and with the preferences of our Net Zero fund.

3 Transparency

The risks of 'net zero-washing' are real. Methodologies on net zero investing are still emerging, and disclosure by corporates is patchy, despite the progress made since the publication of the Task Force on Climate-related Financial Disclosures* (TCFD) recommendations. In this context, it is important that we are transparent with our clients and wider stakeholders about limitations in our approach, including gaps in data or methodology. We seek to avoid 'black box' approaches, or simple metrics which could obscure a more complex reality.

* The Financial Stability Board created the Task Force on Climate-related Financial Disclosures (TCFD) to improve and increase reporting of climate-related financial information.



Our approach

The basis for our approach for listed assets (equities and corporate bonds) is the Net Zero Investment Framework (NZIF), developed by the Paris Aligned Investment Initiative[1]. We helped to develop the Framework, and in 2021 co-chaired an Implementation Working Group. This group brought together asset owners and managers to discuss a range of issues arising as we put the Framework into practice. 2024 saw the publication of NZIF 2.0, which saw some methodology updates and brought together approaches from different asset classes into a single guidance document.

In our own implementation, there were a number of issues where we had to make judgements and choices, in the interests of transparency and of informing the investor debate.

Whilst we believe our methodology combines the best quality data sources we can identify, we believe that – as in other areas of sustainable finance – data is only the starting point for deeper analysis. No data source is perfect or can fully reflect the complexities of climate change policies at an individual company. However, data models do enable portfolio analysis to be undertaken on a systematic basis, and provide a 'heat map' of where the biggest risks are likely to be – allowing us to prioritise our investment analysis and engagement resources. The data will also allow us to report a range of metrics to our clients, in a way that is consistent with how other managers using the Framework are reporting.

[1] Paris Aligned Investment Initiative – Investing for a net zero future.
The Paris Aligned Investment Initiative (PAII) was established in May 2019 by the Institutional Investors Group on Climate Change (IIGCC)

Company-level alignment assessment

Our focus on real-economy reductions led us to place a strong focus on the analysis of investee company alignment with a forward-looking net zero pathway, and the use of stewardship to encourage companies not yet aligned to move towards a net zero pathway.

Data and metrics

To date our model for listed equities and corporate bonds covers over 7000 companies, and draws in data from a range of sources. Recognising that data may be imperfect, and also that new company commitments will take time to show in the data, we also have the ability to override the model ratings where there is publicly available evidence of a company's policy.

Data sources for company alignment assessment

Climate Action 100+ Benchmark: This gives a highly detailed company net zero analysis, and we use these indicators in preference to any other data source, where available. The Benchmark currently covers 166 of the world's largest-emitting companies.

Transition Pathway Initiative (TPI): TPI has a wider coverage than CA100+. TPI is a global initiative led by asset owners and supported by asset managers. Aimed at investors and free to use, it assesses companies' preparedness for the transition to a low-carbon economy.

Science Based Targets initiative (SBTi): SBTi provides an independent methodology and approvals process for companies to set emissions targets in line with low-carbon pathways. Its 'Business Ambition for 1.5°C' pledge is designed for companies prepared to commit to the highest ambition level.

Carbon Disclosure Project (CDP): For more than two decades, CDP has run a global disclosure service, which now covers climate change, water and forests. Investor signatories can access a full download of all data provided in company disclosures.

MSCI ESG: Our main commercial ESG data provider is MSCI. Uses of this data in our net zero tool include company emissions data and the analysis of targets.

We rate companies in 8 categories (2 of which are only rated for Climate Action 100+ companies). These are broadly consistent with the criteria set out in NZIF 2.0, although with some differences. We include indicators on Governance and Policy engagement, which are not part of the core NZIF 2.0 criteria; and we do not have a rating on capex alignment due to data shortages, but this does form part of our analysis and engagement. Our decisions on which indicators to cover have been based on a combination of the availability of data and the maturity of assessment methodologies.

5 Data Sources

CDP
Climate Action 100+
MSCI
Science Based Targets – Driving ambitious corporate climate action
Transition Pathway Initiative

8 Metrics

1. Commitment
2. Targets - Interim targets set
3. Targets - Targets aligned
4. Disclosure
5. Strategy
6. Policy engagement
7. Governance
8. Climate risk & accounts

Alignment rating for each company

- **ALIGNED** – Meets expectations in all categories
- **ALIGNING** – Meets core expectations
- **COMMITTED** – Has committed to set a science-based target
- **NOT ALIGNED** – Does not meet expectations
- **NOT ASSESSED** – Does not disclose sufficient data

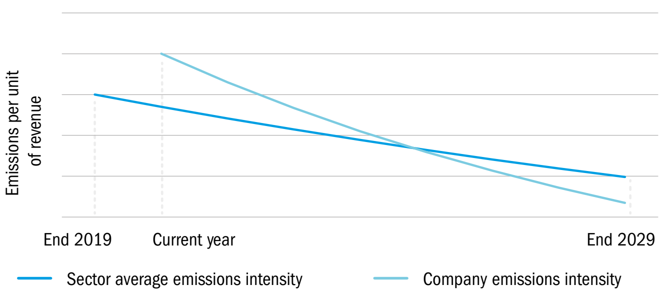
Assessing the ambition of companies' emissions targets

Metric 3 – Targets Aligned considers whether companies' medium-term targets are sufficiently ambitious, compared with a a credible net zero trajectory. Making this judgement is at the core of assessing whether a company's climate strategy is fully net zero aligned.

There are significant challenges in making this calculation, as the degree of ambition is not always apparent from companies' own targets and disclosures. Base years vary significantly, and targets can take different forms (for instance, absolute versus intensity targets), as well as covering different scopes of emissions. Some data sources, such as Climate Action 100+, rate this alignment; in other cases, calculations are needed to fill the gap.

Our net zero model's assessment of the adequacy of companies' Scope 1 and 2 targets uses data provided by MSCI ESG, who provide a standardised calculation of 2030 commitments. It compares these company commitments with a 1.5 degree consistent trajectory. This trajectory is calculated on a sector-specific basis where possible, recognising that emissions reductions are more technically challenging in some industries than others. We take sector emissions reductions rates from the International Energy Agency's 1.5 degree report[2]. For those not specified in the report, we use a default rate. We can then construct a net zero aligned trajectory, based on current industry average emissions intensity, and compare this with the portfolio trajectory that considers existing company reduction targets. If the company target is below the net zero trajectory by 2030, then we rate the target as 'aligned'[3].

Assessing company emissions targets



Source: Columbia Threadneedle Investments

At this point in time, we have not included Scope 3 data in this analysis. We hope to build this in for sectors where Scope 3 is particularly material, as better quality data becomes available. However, our model does rate disclosure and target-setting for Scope 3 emissions for sectors where this is most material.

[2] Source: Net Zero by 2050 – Analysis – IEA, May 2021
[3] In principle, alignment calculations should be based on cumulative emissions; however we have used point-in-time calculations (in line with, for instance, the Transition Pathway Initiative) for analytical simplicity.

Alignment ratings for companies

Based on the data across these 8 metrics, our model gives companies an overall alignment rating. This is based on how many of the above expectations the company meets, with higher standards set for companies in the most emissions-intensive industries:

- **Aligned:** Company meets expectations highly in all relevant categories
- **Aligning:** Company meets core expectations around disclosure, setting targets and strategy
- **Committed:** Company has not yet met these expectations, but has committed to set a science-based target
- **Not aligned:** Company does not meet expectations, and has not committed to set a science-based target

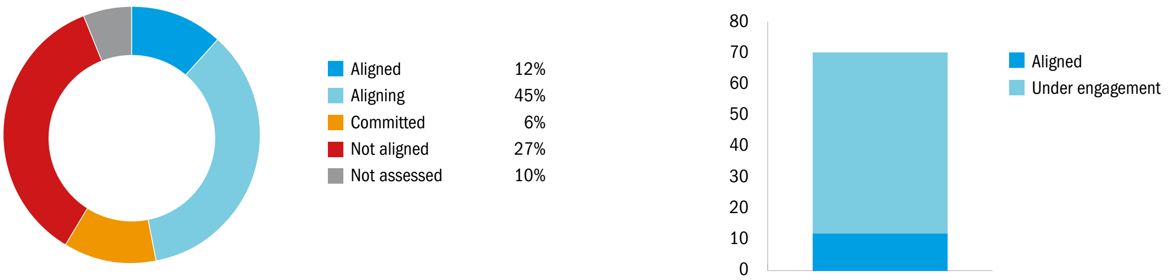
Two categories of companies are not given a rating: companies in the lowest-impact sectors from a climate perspective, and in the finance sector. We see climate change as a critical issue for financial institutions, but the metrics used to judge the adequacy of performance are very different to those for industrial sectors with high direct emissions. The impact of financial institutions comes primarily through their lending and investment policies, and methodologies to judge whether these are 'net zero aligned' are still relatively new, with data on Scope 3 financed emissions very limited. This is an area we will seek to address as our methodology evolves, using some alternative metrics.

Portfolio analysis and target setting

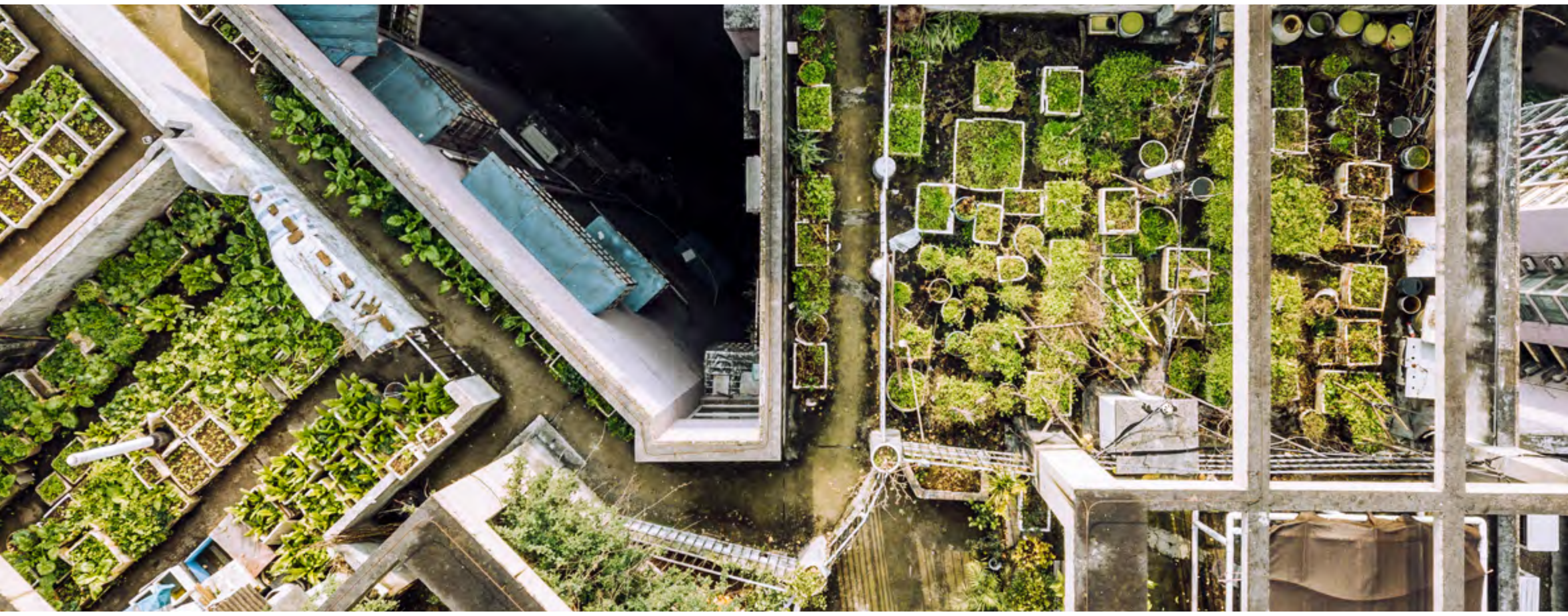
Once we have established company alignment status, we can analyse how this aggregates to portfolio level, and what actions we will take to improve alignment over time.

The pie chart shows a representative breakdown of companies in each alignment rating, calculated as a percentage of total portfolio emissions. We will set targets to increase the proportion of companies in the Aligned or Aligning category over time, and will make active use of stewardship to improve the alignment of companies, aiming to have at least 70% of portfolio emissions either Aligned or under engagement for the funds committed to using this net zero framework.

Example of net zero alignment analysis, as a percentage of portfolio emissions



Source: Columbia Threadneedle Investments. Numbers are for illustrative purposes only.



Net zero stewardship

Stewardship is at the heart of our Net Zero approach. We use constructive dialogue with companies in our Net Zero funds to understand their energy transition strategies, and encourage improvements in practice.

Consistent with client expectations, we engage with issuers in companies and sectors where we believe climate risk may be financially material, with a focus on heavy greenhouse gas emitters and those with high exposure through their value chain and product mix.

We see the following elements as the core aspects of good practice in the management of climate change and energy transition risk, in relation to our Net Zero funds:

- An overall net zero ambition for 2050 or earlier
- Short- and medium-term emissions targets
- Disclosure of emissions, including Scope 1 and 2 and material Scope 3
- A credible transition strategy, including identification and quantification of levers to achieve targets, and quantification of how opex / capex is allocated
- Good governance of climate risks and opportunities, including board-level oversight and a link of material climate factors to remuneration

Whilst consideration of these factors applies across different sectors, we also have identified specific focus areas for key industries, recognising that there are unique circumstances that must be understood for individual companies in their transition pathway. We track and monitor engagement and use milestones to measure our progress against those objectives. Our best practice expectations on net zero are set out in detail in our paper 'Net Zero: Best Practice and Engagement Approach'.

Engagement takes place collaboratively, with Sustainability Research analysts, fundamental research analysts and portfolio managers working together consistent with client mandates. We engage both directly one-on-one, and through selected engagement collaborations where these align with our goals of serving our clients.

Alongside engagement, proxy voting is a tool available to us as stewards for our clients' capital. Where companies in high-impact sectors fail to provide investment-relevant climate disclosure or do not have a robust climate change risk management strategy, we may oppose certain management resolutions if we think that this is in the best long-term economic interests of our clients. In certain instances, we may support shareholder resolutions calling on companies to improve their business planning and public disclosure in relation to climate change risks and opportunities. Note that we apply our voting guidelines to client portfolios in a manner that considers our clients' respective investment objectives and best long-term economic interests. This could result in our voting on a matter the same way (or differently) for different clients.

Portfolio-level emissions target setting

As well as the asset-level analysis, we also aim to compare portfolio-level emissions with a 1.5 degree aligned trajectory. We see portfolio level data as an accountability tool, to monitor how well our investment and stewardship activities are working in achieving actual reductions in emissions.

Setting a reference pathway

In terms of understanding the required global emissions reductions, our starting point was the IPCC[4] report, Global Warming of 1.5°C. This report concluded that in model pathways with no or limited overshoot of the 1.5°C limit, global CO_2 emissions need to decline by about 45% from 2010 levels by 2030[5]. Since 2010, however, global emissions have risen from 47.3 $GtCO_2e$ to 52.4 $GtCO_2e$ by 2019. Therefore the required global effort is around a 50% cut in emissions from a 2019 baseline by 2030.

The task then is to translate this global trajectory into a pathway for individual portfolios. There are some key decision points here:

- Which emissions metric to use
- Baseline year and target year
- Whether to account for a portfolio's start point by using a benchmark-relative approach, or to use a self-decarbonisation approach
- If using a benchmark, which one to select

Emissions metric: In line with best practice from the Platform for Carbon Accounting Financials, the metric we will focus on for the emissions trajectory is financed emissions intensity, expressed as CO_2e/$mn invested.

Financed emissions intensity =

$$\frac{\sum_{c}^{n}\left(\frac{\text{current value investment}_{c}}{\text{issuer's enterprise value}_{c}} * \text{issuer's Scope 1 and Scope 2 GHG emissions}_{c}\right)}{\text{current portfolio value (in millions)}}$$

The main advantage of this metric is that it is an ownership-based metric, allowing measurement of an investor's share of emissions proportional to its exposure to the investee's total value.

One downside is that the denominator for calculating the intensity measure, $ million invested, is subject to both market movements and inflation, meaning that emissions intensity is likely to change purely due to these factors even if nothing changes in the real world. To counter this, we also plan to monitor absolute emissions, and will seek to apply a normalisation approach to the intensity figure once methodologies are available. We will also measure and monitor weighted-average carbon intensity (WACI) as a metric to help understand climate risk.

[4] The Intergovernmental Panel on Climate Change (IPCC) is the United Nations body for assessing the science related to climate change.
[5] IPCC, 'Special Report: Global Warming of 1.5°C', 2018

Baseline and target year: Where possible we will use a baseline year of end-2019. The target year is end-2029.

Benchmark-relative versus self-decarbonisation: There are two types of approach to setting emissions pathways – benchmark-relative, which means comparing a Net Zero fund's emissions to those of a net zero-aligned representative benchmark; and self-decarbonisation, which means cutting a fund's own emissions by a given percentage, set in line with a net zero pathway.

We have selected a benchmark-relative approach, on the basis that this allows us to make an allowance for the starting point for each Net Zero fund – meaning that Net Zero funds that are highly carbon-intensive to start need to cut emissions by more than those which are already well below their benchmark. This is consistent with the way we approach target-setting with companies, where we ask for greater ambition from companies which are above their own sector average.

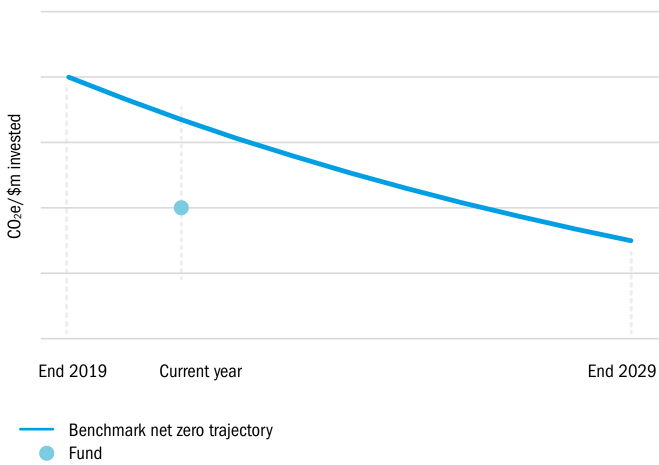
Choice of benchmark: There are various options for selecting which benchmark to compare fund emissions performance with. Options include:

- A benchmark which reflects the whole global economy (such as MSCI World);
- Each fund's own market benchmark;
- An artificial benchmark, constructed to reflect the sectoral and/or regional exposure of each individual fund; or
- A climate benchmark, such as the EU Paris-Aligned Benchmark.

There are advantages and disadvantages to each option. In theory, constructing a benchmark with identical sector allocations to a fund, but using sector-average emissions, would give the most representative starting point for a future emissions pathway. In our internal model, we have calculated a benchmark in this way. However, it is analytically complex both to construct and to communicate, potentially undermining the principle of transparency.

We have chosen instead to use each Net Zero fund's own market benchmark to construct a future emissions reference pathway. This has the advantage of consistency with the way we analyse and report financial results. Market benchmarks are also chosen to reflect the investment universe of the fund, and so are reflective of regional or country restrictions and differences in average emissions.

Example of a fund's emissions performance versus its own market benchmark



Source: Columbia Threadneedle Investments

The diagram on the previous page shows how these choices shape the emissions pathway. We will compare fund level emissions with the net zero aligned trajectory, which declines by 50% from end-2019 to end-2029. Whilst the target is some years away, we will monitor and report progress on an ongoing basis.

A key part of monitoring will be to understand not only what changes in emissions intensity have happened, but what the reasons for these are. Some changes in intensity may be due to market movements or inflation (as discussed above); some to sector reallocation or company selection; and some to emissions reductions by our investee companies. In line with the principle of achieving real-world emissions, we will seek to achieve reductions where possible through the decarbonisation of the companies we choose to invest in.

Finally, there may be circumstances where a Net Zero fund exceeds the pathway, but we believe this is justified from a climate change point of view. In particular, this may occur if a fund manager chooses to invest in some high-emissions companies which we are confident have a strong net zero alignment strategy, but where emissions remain high during a transition period.

Investments in solution providers

Net zero methodologies have put a heavy emphasis on the decarbonisation of portfolios. However, as investors we also need to focus on our role in shifting in capital allocations toward climate solutions. The scale of capital needed is enormous – for energy systems alone, the International Energy Agency recently estimated[6] that to reach net zero emissions by 2050, annual clean energy investment worldwide will need to more than triple by 2030 to around $4 trillion. Investments will also be needed in adaptation to the changing climate, and to secure emissions cuts in areas including deforestation and land use.

The EU Taxonomy has provided a methodology for classifying climate solutions, with work underway in other parts of the world, such as in Canada and the UK, to develop similar approaches.

[6] Net Zero by 2050 – Analysis – IEA, May 2021

Net zero – what next?

At Columbia Threadneedle Investments we seek to understand and influence evolving best practice in Net Zero approaches. We are tracking developments such as NZIF 2.0, which includes approaches for private as well as public asset classes. As well as the methodologies we have for real estate, equities and bonds, we are also working on approaches for sovereign bonds and private markets. The development of guidance on transition plans, and the incorporation of this into international accounting standards and regulation, is another important development.

We will continue to track our progress and to be transparent about our approach as approaches to Net Zero for investors mature, and will seek to provide a best-in-class approach to meet the needs of our clients.

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