EDENTREE RI EXPERT BRIEFING | OCTOBER 2021

CLIMATE CHANGE AND NET ZERO

Scientific consensus is that we need to bring global carbon dioxide emissions to net zero by 2050 to give the world a chance of averting the worst impacts of climate change. But what does net zero mean in practice? In this RI Expert Briefing, which coincides with the publication of our annual portfolio carbon footprints, we define commonly used terms such as net zero and outline what we look for in a company's response to climate change.

WHAT LIES BEHIND EFFORTS TO ACHIEVE NET ZERO?

A consensus of scientific opinion agrees that the world is warming and this is largely due to human activity, with global planetary temperatures greater than they have been for 125,000 years. Our planet has already warmed by approximately 1.1°C compared to pre-industrial levels, and according to the IPCC (Intergovernmental Panel on Climate Change) we might reach an increase of 1.5°C as early as 2030. A 2°C temperature rise would be catastrophic.

The IPCC defines net zero as the point where "anthropogenic emissions of greenhouse gases (GHG) to the atmosphere are balanced by anthropogenic removals over a specified period".

From a physical science perspective, limiting global warming to 1.5°C requires reaching net zero carbon dioxide (CO_2) emissions by at least 2050.

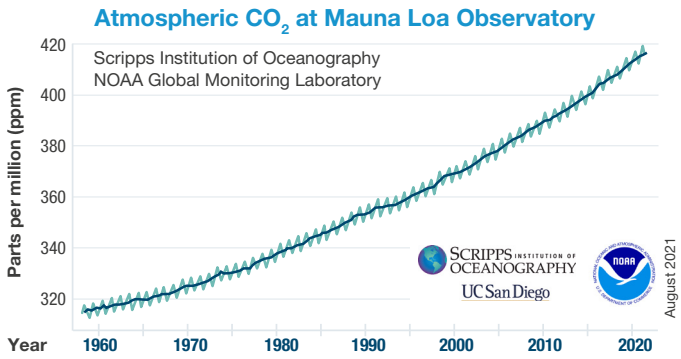
WHAT ARE GREENHOUSE GAS EMISSIONS AND WHY DO THEY MATTER?

Climate change is fundamentally linked to the absolute concentration of greenhouse gas (GHG) emissions in the atmosphere.

GHG emissions are released during a number of activities, with the majority of emissions coming from the combustion of fossil fuels, including coal, oil and gas. There are many different greenhouse gases, including carbon dioxide (CO_2), methane (CH_4), nitrous oxide (N_2O), fluorinated gases and water vapour. Once released, GHG emissions are trapped in the atmosphere and thereby release heat and contribute to global warming.

Carbon dioxide (CO_2) is the most prevalent and pervasive greenhouse gas, as well as the gas most commonly emitted by humans. For this reason, scientists have maintained a long-running observational record of the levels of CO_2 in the atmosphere. One key source of data is provided by Oceanic and Atmospheric Research, an agency of the US Department of Commerce. Based at its monitoring station in Mauna Loa, Hawaii, we can see the sobering impact of humanity's role in emitting carbon into the atmosphere.

Data collection began in 1958, when observed atmospheric carbon stood at less than 320 parts per million (ppm). By 2000, it had risen to around 380ppm and since the Millennium, there has been rapid escalation to exceed 400ppm in 2015. By May 2021 a monthly average of 418.92ppm had been reached. The atmospheric burden of carbon is now comparable to where it was during the Pliocene Age, between 4.1-4.5 million years ago, when sea levels were at least 23 metres higher than they are today[1].



It is estimated that we are adding around 40 billion metric tonnes of CO_2 annually, and scientists agree that irreversible and catastrophic climate change will occur at or around 450ppm – a line that is now in sight – hence the urgency to achieve net zero.

[1] www.noaa.gov and https://gml.noaa.gov/webdata/ccgg/trends/co2/co2_annmean_mlo.tx

WHY SHOULD INVESTORS BE CONCERNED ABOUT EMISSIONS?

Unless we see immediate, rapid and large scale reductions in emissions over the next two decades, then the goals of limiting average temperature increases this century to 1.5°C or even 2°C above pre-industrial levels will be beyond reach.

In order to secure long-term sustainable returns for our clients we seek to protect our portfolios from climate risks and expose them to opportunities in the shift to a low-carbon global economy. As well as a clear moral case for action, as shareholders, we part-own the companies we invest in. From this perspective, we also part-own the emissions generated by those companies and can therefore play a key role in encouraging businesses to reduce their emissions and implement robust climate strategies.

WHAT IS A CARBON FOOTPRINT AND HOW IS IT CALCULATED?

A carbon footprint is the total GHG emissions caused directly and indirectly by an organisation. It includes CO_2 – typically the main contributor to an organisations carbon footprint – as well as other GHGs such as methane (CH_4), nitrous oxide (N_2O), and fluorinated gases[2].

A carbon footprint is calculated by summing the emissions resulting from every stage of an organisations activity. Different greenhouse gases are accounted for by calculating the global warming potential of each gas in units of carbon dioxide equivalents (CO_2e), enabling organisations to give carbon footprints a single unit of CO_2e for easy comparison.

Emissions are then split into three categories, known as 'Scopes':

- **Scope 1 emissions** refer to direct GHG emissions, such as emissions from sources that are owned or controlled by the organisation;
- **Scope 2 emissions** refer to indirect GHG emissions stemming from the consumption of purchased electricity, heat or steam;
- **Scope 3 emissions** are all indirect emissions not covered in Scope 2. This includes both upstream and downstream supply chains, such as the extraction and production of purchased materials and fuels, flight emissions, waste disposal, investments, etc.

If you manufacture kettles, GHG emissions incurred in the manufacturing process would be Scope 1, the energy sourced that allows manufacturing to take place would be Scope 2 and how your customers ultimately use those kettles would be Scope 3.

Most organisations will initially focus their plans on Scope 1 and Scope 2 emissions yet for many, the bulk of their carbon footprint lies in Scope 3 emissions, which are on average 5.5 times higher than direct emissions[3]. The inclusion of Scope 3 emissions in a carbon footprint is therefore essential, but extremely complex to calculate.

Getting this data can sometimes be a challenge and in our engagements with companies, we continuously aim to encourage the reporting of this information which is so vital for investors.

[2] https://www.carbontrust.com/resources/carbon-footprinting-guide

[3] https://www.cdp.net/en/research/global-reports/global-supply-chain-report-2019

NET ZERO AND CARBON NEUTRAL – WHAT IS THE DIFFERENCE?

Recognising the importance of keeping global warming to 1.5°C, organisations are increasingly adopting net zero climate targets. Today, nearly 70% of the global economy is committed to achieving net zero by 2050[4]. This growing interest in net zero targets is welcome; however, as is often the case with ambitious targets, the key question is how firms are backing up their talk with action.

Net zero is often used interchangeably with the term 'carbon neutral', and although both refer to no overall change in the carbon in the atmosphere, it is important to note that the focus on net zero should be to reduce emissions across a company's entire value chain, whereas carbon neutral more often relies on passively offsetting emissions (e.g. tree planting).

Whilst there is a place for credible, evidence-based offsets to tackle residual emissions as part of a net zero plan, it cannot be seen as an end in itself and should always be backed up by a robust long-term plan of absolute carbon emissions reduction.

THE IMPORTANCE OF A JUST TRANSITION

As well as a focus on absolute emission reductions and SBTs, we recognise that the transition to a low-carbon economy needs to be people-centred, just, and inclusive. The effects of climate change are not equal - this is perhaps most clearly seen in the climate impact of small island based nations such as the Marshall Islands in the Pacific where extreme weather events and rising sea levels will have a destructive environmental and social impact on the island cluster owing to its low elevation.

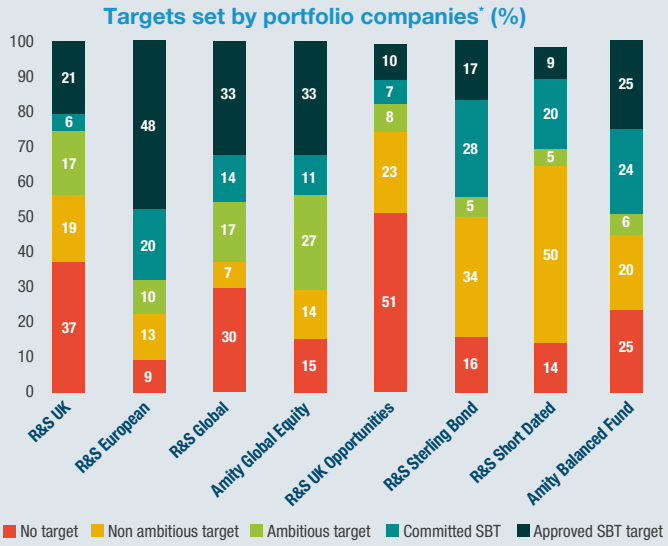
A transition of the scale and speed needed to achieve net zero by 2050 cannot be achieved without sustained support and participation from citizens. The transition therefore needs to take into account the social and economic impacts on individuals and communities, and businesses will need to ensure that people can transition jobs and thrive in the new economy as part of any net zero strategy.

WHAT DO WE LOOK FOR IN COMPANY'S MANAGEMENT OF THE ISSUE?

Setting meaningful and ambitious targets lies at the heart of every credible approach to net zero. Companies tend to focus on the absolute long-term goal – for example net zero by 2050 – but interim targets or milestones, and a clear emission reduction pathway are, in our view, much more important.

At EdenTree, we place a strong emphasis on encouraging the setting of Science Based Targets (SBTs)[5] through our engagement activity. SBTs provide companies with a clearly-defined path to reduce emissions. Targets are considered 'science-based' if they are in line with what the latest climate science deems necessary to meet the Paris Agreement of limiting global warming to 1.5°C above pre-industrial levels. In addition, SBTs mandate an approach which relies on absolute emission reductions rather than carbon offsetting, and also requires companies to tackle the full extent of their emissions including Scope 3.

Over the years, we have been encouraged to see that the number of companies in our Funds that have set or committed to set SBTs has increased. The results of our latest assessment is shown below, and we are particularly pleased the R&S European Fund has nearly 70% of holdings that have either set or committed to set an SBT. As expected, funds with a higher proportion of smaller-cap companies such as R&S UK Opportunities have fewer SBTs, so this is one area where we will continue to engage with companies.



[2] https://sciencebasedtargets.org/blog/what-is-good-net-zero

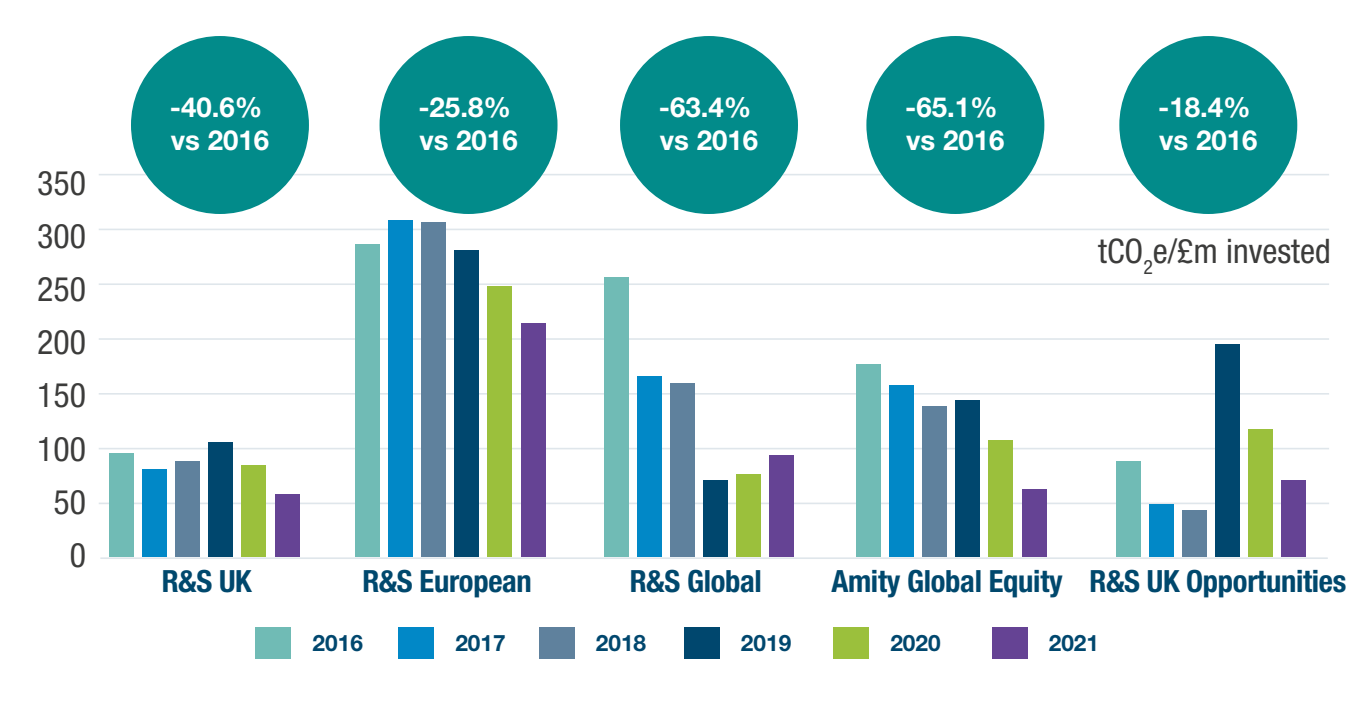
[3] https://sciencebasedtargets.org/

* rounding prevents all numbers adding up to 100%

THE RESULTS OF OUR CARBON FOOTPRINTS

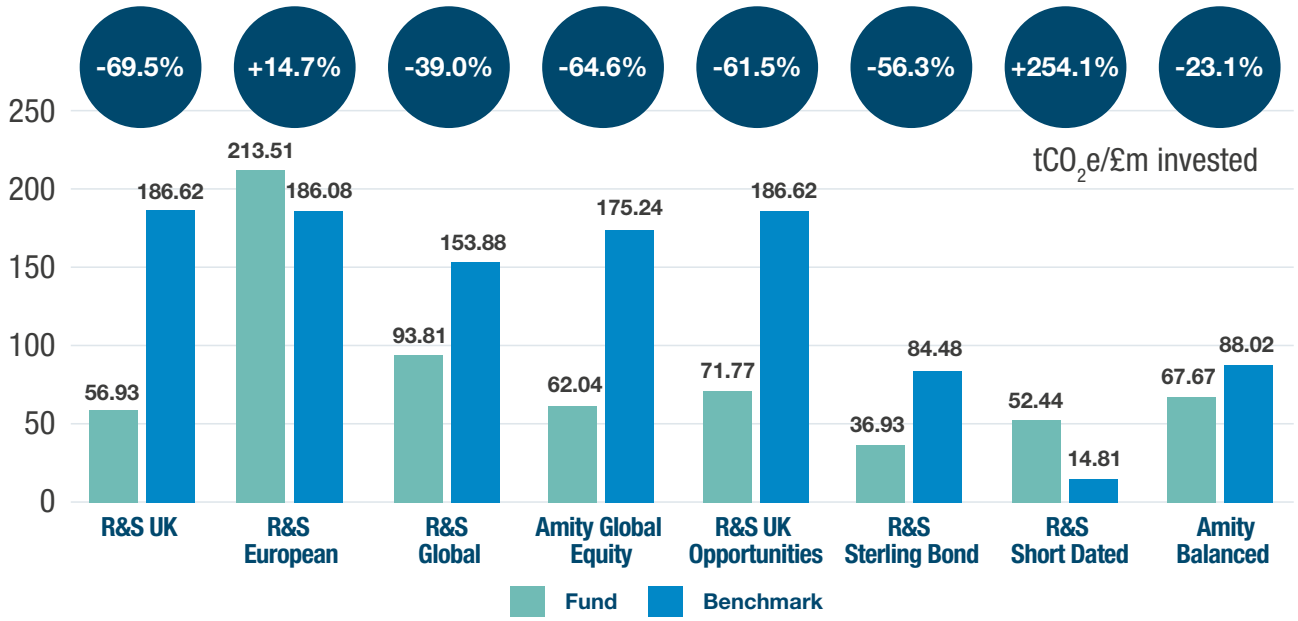
We are committed to transparency, which is why six years ago we signed the Montréal Pledge. This means we have voluntarily committed to measure and disclose the carbon footprint of our portfolios on an annual basis. The annual results are available on our website, and our latest report can be found **here**

Six years of data shows how portfolio carbon intensity has evolved over time. All equity funds have a lower carbon intensity than six years ago, meaning that per £1m invested, associated emissions are lower than when we began this exercise. The R&S Global Equity Fund and Amity Global Equity fund have made significant progress, having reduced their intensity by 63.4% and 65.1% respectively since 2016.

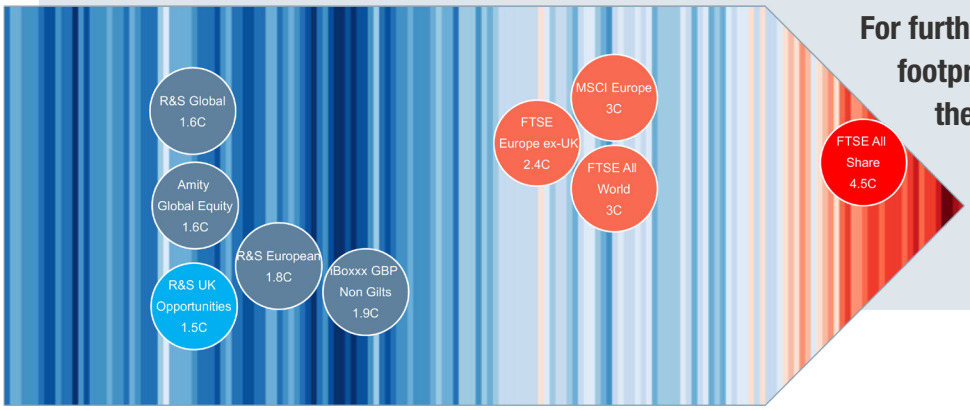


During the last six years, we have also compared the carbon intensity of our portfolios to their respective benchmarks, shown in the graph below. This year, four out of five equity funds showed a lower intensity per £1m invested than their benchmarks which is encouraging. Of particular note are the R&S UK, R&S UK Opportunities, and Amity Global Equity Funds which were 69.5%, 61.5% and 64.6% lower than their respective benchmarks.

In the past, we have faced challenges in measuring the carbon footprint of our fixed-income and balanced portfolios however, this year we have been able to assess these funds for the first time. The results of this assessment, as well as the funds' performance against their respective benchmarks (per £1m invested), is shown in the graph above. Whilst R&S Sterling Bond and Amity Balanced are both below their respective benchmarks, R&S Short Dated Bond Fund, despite having low overall emissions, is significantly higher than the benchmark. This is because the benchmark is typically overweight in financials, whilst the Fund has a more diversified portfolio of instruments.



We know that overall our economies are heading towards irreversible climate change without a momentous effort, meaning that solely striving to be below the benchmark is not enough. In order to tackle climate change, we need businesses and investments to align with the goals of the Paris Agreement. Due to significant improvements in the methodology, for the first time this year we have been able to assess whether our investment portfolios are aligned with Paris. We are very pleased that the majority of our funds are aligned with the Paris goal of limiting temperature increases to 1.5°C, with all our funds under 2°C as can be seen on the graph below.



For further detail on our carbon footprints, including information on the methodology used, please refer to our Montréal Pledge report

ISS Data as of 31.12.2020, except R&S UK Opportunities data as of 31.01.2021 (due to recent transition of the fund)

CONCLUSION

When looking for investments, we look for companies that show a structured understanding of their environmental impacts and have a strategy in place to drive emissions reductions. Our Responsible & Sustainable Funds have not been invested in fossil fuels or mining for many years, and we eschew investment in high emitting sectors such as automotive, aviation and heavy industry, whilst directing capital to more sustainable solutions.

In addition, engagement with companies is an important part of our responsible investment approach, and climate change is a permanent pillar of our engagement strategy. In parallel with our carbon foot-printing work, we engage with the heaviest emitting companies in our portfolio to encourage the adoption of science-based targets. Our engagement focusses on transparent disclosure, emission trends and emission reduction targets including the setting of SBTs.

Overall, we believe that our Responsible & Sustainable funds are well positioned for clients who are seeking a lower exposure to high-emitting sectors and companies and overall alignment of their capital with the Paris Agreement.

THE RESPONSIBLE INVESTMENT TEAM

We have a specialist in-house Responsible Investment (RI) team who carry out thematic and stock-specific research to identify ethically responsible investment ideas for our range of screened Funds. Headed up by Neville White, Head of RI Policy & Research, and supported by Responsible Investment Analysts Carlota Esguevillas and Rita Wyshelesky, the team is also responsible for creating an on-going dialogue with companies, allowing us to engage on a wide variety of ethical and socially responsible investment concerns. For investors, it's an added layer of assurance that client money is being invested in companies that are operating in a responsible and sustainable way. Our ethical and responsible investment process is overseen by an independent Advisory Panel that meets three times a year, and comprises industry and business experts, appointed for their specialist knowledge.

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We hope you enjoy this RI Expert Brief and find it useful and informative.
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