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Multi-Asset Climate Solutions Sustainability Report 2023

abrdn.com

Contents

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Introduction

abrdn has partnered with The Big Issue Group (TBIG) to bring you the abrdn Multi-Asset Climate Solutions (MACS) Fund. The Fund is for investors who want their savings to be invested in companies whose products and services play a pivotal role in mitigating climate change and other environmental harms.

This Sustainability Report aims to demonstrate the Fund's very high allocation to green revenues (our key metric) as well as reporting performance on a range of other metrics including: carbon intensity, ESG scores, exclusions as a result of ethical screens, the alignment with Sustainable Development Goals, and voting and engagement activity.

Capital is invested in the equities and bonds of companies whose products and services are helping to mitigate climate change and build a more sustainable future. We have searched the globe to find companies whose products drive the shift to a zero-carbon, green economy.

By taking a Multi-Asset approach you can benefit from a broader spectrum of investment opportunities and from diversification which helps to manage risk.

The Fund is driven primarily by its focus on climate solutions but we want to make sure that when we invest in a climate solutions company, it is not involved in other harmful activities. The Fund excludes companies with material exposure to a number of harmful and ethically controversial activities.

Foreword from

BIG ISSUE GROUP[1]

Multi-Asset Climate Solutions (MACS): built in partnership with The Big Issue Group (TBIG)

Climate change hits disadvantaged people and communities first and hardest. The Big Issue Group's mission is to dismantle poverty, now and for future generations; so tackling the effects of climate change is close to our hearts. With this in mind, we set out our vision for a climate fund, and partnered with abrdn, a trusted asset manager whose values were aligned to our own.

"The Big Issue is all about solutions that unlock opportunities for people living in poverty allowing them to earn, learn and thrive. Twenty percent of the net revenues generated from the Multi Asset Climate Solutions Fund goes directly to The Big Issue Group to further our mission. In 2022, we grew our team of Big Issue vendors who earned a collective £3.76 million. Out of the 3,637 vendors, 899 sold The Big Issue for the first time in 2022 – highlighting how many are in financial need for the first time. Through Big Issue Invest, which manages and advises on £450 million assets invested in impact funds, we invested in 153 social enterprises in 2022. They in turn supported 2.1 million people in the UK with 92% of investments contributing to core solutions to poverty. Through the partnership with abrdn on the Multi-Asset Climate Solutions Fund we hope to further The Big Issue's mission for a world that works for everyone."

Nigel Kershaw OBE
Chair of The Big Issue Group

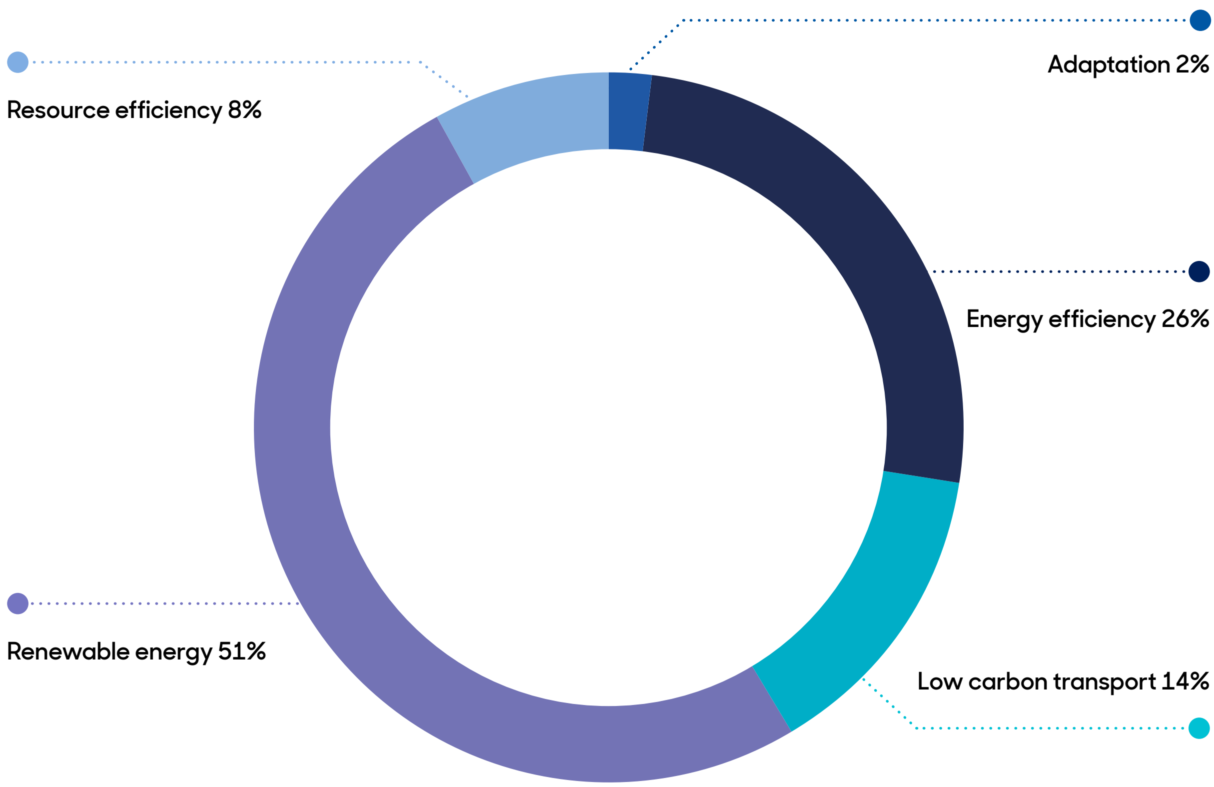
[1] © Company selected for illustrative purposes only to demonstrate the investment management style described herein and not as an investment recommendation or indication of future performance.

Highlights

The transition to a low carbon economy will require substantial capital investment and, in return, should provide investors with attractive returns. By taking a Multi-Asset approach clients can benefit from a broad spectrum of investment opportunities while the diversification across different asset classes and themes is designed to smooth the path of returns over time.

86%	MACS has 86% green revenue exposure, compared to 9% for MSCI ACWI.
27%	The Fund's carbon footprint is 27% lower than that of MSCI ACWI.[2]

Figure1 : MACS' allocation to climate solutions



Source: abrdn, Trucost, MSCI, FTSE Russell, March 2023.

[2] Carbon footprint is measured by the Weighted Average Carbon Intensity (Scope 1 and 2) for the equities held by the Fund.

AA

Average ESG rating
for the Fund: AA[3]

8%

Projected global growth rate of
renewable energy 2020- 2040,
8% per annum.[4]

12%

Projected global growth rate
of electric vehicles 2020-2040,
12% per annum.[4]

[3] MSCI ESG rating for the equities held by the Fund (source MSCI).
[4] Source: BNEF (March 2022).

Policy developments

The last year has seen some progress on climate policy, though not nearly enough to achieve the Paris 1.5 °C target. One of the most important developments was the passing of the US Inflation Reduction Act (IRA).

This legislation commits almost $400bn, principally via tax credits, to accelerate the transition to clean technology and to prioritise domestic manufacturers and producers. Passed in August 2022 it was implemented Jan 1 2023 and has already seen a significant increase in planned investment by US companies. It is estimated that the IRA will lead to an increase in the reduction of emissions from 30% to 40% by 2030 vs 2005 levels.

COP27 was another event we watched closely. While there were some steps in the right direction to support the most vulnerable countries in dealing with climate impacts through the agreement on a loss and damage fund, our view is that it did little to increase the chance of achieving the aim of keeping the rise in temperatures to 1.5 °C or below by 2050 compared to pre-industrial levels. One core topic of debate is the decarbonisation of emerging economies; the announcement of the Indonesia Just Energy Transition Partnership, committing $20bn in public and private financing to Indonesia to fuel its transition from "dirty" to clean energy, was, therefore, one of few tangible positive outcomes.

The other major development in the last year has been the Russian invasion of Ukraine. As well as being a terribly ongoing tragedy, the threat to European energy security has prompted the EU to accelerate progress on energy efficiency and significantly increase the speed of the shift towards domestic renewable energy sources.

Trade policy has seen some interesting developments. The EU is progressing its proposal to introduce carbon border adjustment tariffs and at the World Economic Forum Annual Meeting in Davos, "The Coalition of Trade Ministers on Climate" was announced as the first Ministerial-level global forum dedicated to trade and climate and sustainable development issues. Spearheaded by Ecuador, EU, Kenya and New Zealand, this coalition aims to identify ways in which trade policy can contribute to addressing climate change.

US President Biden issued the first veto of his presidency, rejecting a Republican proposal to prevent pension fund managers from considering factors like climate change. The trend towards a greater polarisation in the response to ESG and climate is a likely consequence as we move from market-based responses (such as ESG scores) towards a focus on 'sustainability'.

Fund objectives and structure

In order to achieve Net Zero carbon emissions by mid-century, investment in the deployment of climate solutions technologies (e.g. renewable energy and electric vehicles) will need to grow from less than $2tn per year today to nearly $6tn per year[5] for the next thirty years or so. We consider this to be one of the biggest investment growth opportunities of our time.

The MACS Fund aims to enable clients to channel their savings to help finance this Net Zero transition, while generating long-term returns from an investment in climate solutions, diversified across themes, regions and companies. This is in-line with the requirements of the new Net Zero Investment Framework.[6]

The Fund aims to invest in the equities and bonds of companies whose core products and services provide solutions to climate change and other environmental challenges; 'climate solutions' for short.

[5] Source: BNEF.
[6] IIGCC (2020) Net Zero Investment Framework.

The Fund focuses on climate solutions in five main areas:

- **Renewable energy** – Solar, wind, hydro, energy storage, smart and efficient grids.
- **Energy efficiency** – Energy management logistics, industrial process enhancements, energy efficient lighting, IT processes, water treatment, and sustainable buildings.
- **Low carbon transport** – Electric vehicles, electrified rail, e-scooters, travel avoidance technologies (e.g. video conferencing).
- **Resource efficiency** – Waste management, recycling equipment, pollution control and leak prevention in water operations.
- **Adaptation** – Sustainable agriculture, flood control and natural disaster management.

Figure 2 shows the weights, within each asset class, for each of the above climate solution categories. Each holding is classified into only one category based on the weighted revenue from the sale of climate solutions products and services.

Figure 2: Fund's weight in climate solutions by theme and asset class

	Equities	Renewable Infrastructure Companies	Corporate Bonds	Total
Renewable Energy	19%	20%	12%	51%
Energy Efficiency	12%	0%	14%	26%
Low Carbon Transport	11%	0%	3%	14%
Resource Efficiency	5%	0%	3%	8%
Adaptation	1%	0%	1%	2%
Total	**47%**	**20%**	**32%**	**100%**

Source: abrdn, March 2023.

To estimate each company's climate solutions revenues we use the FTSE Russell Green Revenues 2.0 data set.

FTSE Russell has assessed the 'green' revenue revenues of over 17000 companies around the world using over 100 categories (everything from wind turbine equipment manufacture to geothermal power generation). This is the most comprehensive assessment we have found on this topic.

Measuring the Fund's investment in climate solutions

Green taxonomies. Governments in the UK, the EU and elsewhere want to encourage investors to deploy capital to support the Net Zero transition. To do this, they are developing 'taxonomies' which classify and define the business activities that contribute most significantly to the Net Zero transition and wider sustainability goals. FTSE Russell developed a green taxonomy in 2008, but governments have now announced their own initiatives. The EU Taxonomy of Sustainable Activities was the first example and the UK government is currently developing its own taxonomy.

It is possible to measure the share of a company's revenues that are aligned with the objectives of these taxonomies. This allows an investment fund's customers to assess how strongly aligned the fund is with these sustainability goals. We calculate the 'weighted green revenues' of the Fund to estimate the proportion of the Fund that is invested in climate solutions.

We identify the percentage of a company's revenues which are green; in other words, which activities undertaken by a company reduce the carbon in the atmosphere. For example, a car manufacturer might derive 60% of its revenues from electric vehicles and 40% from diesel. This company would have a green revenues score of 60%.

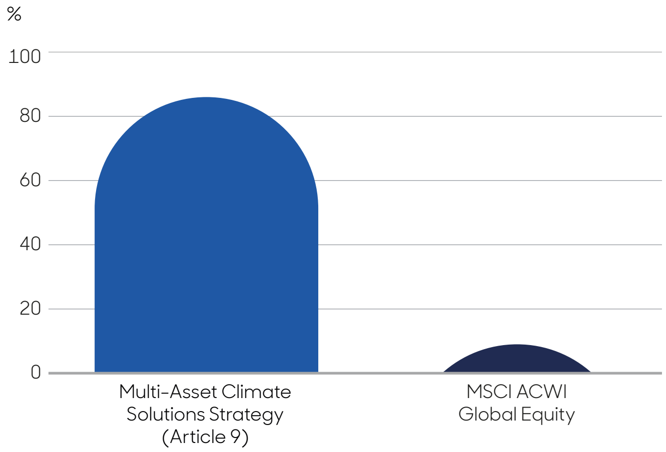
We show the range of different revenue exposure levels in Figure 4. We calculate the weighted average 'green' revenue exposure by multiplying the weight of each company in the Fund by the percentage of its revenues that are 'green' (i.e. taxonomy aligned) and add up the results to give a fund-level average.

This metric is one of the most important ways that the MACS Fund demonstrates its green credentials.

Whilst data providers are expanding their coverage and methodologies, we also make use of our own company insights, and we include these in our assessment of green revenues. As shown in figure 3, the weighted average green revenue exposure is over 85%, using a combination of the FTSE Russell GR 2.0 taxonomy alongside desk-based assessments. This contrasts with just 9% for the most widely used global equity index (MSCI ACWI).

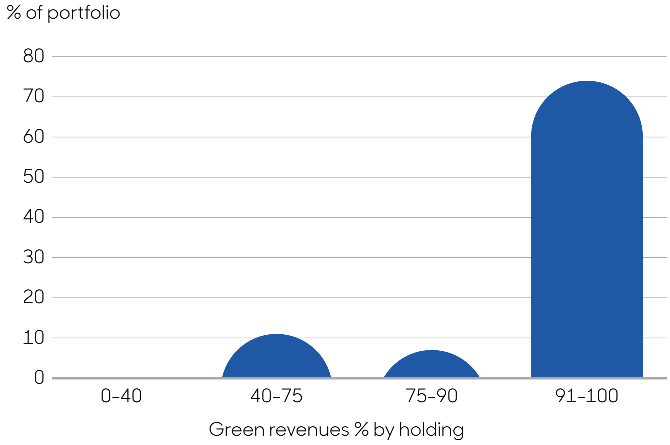
The MACS Fund achieves this very strong alignment by ensuring that every single company held by the Fund has substantial green revenues, as shown in figure 4. Nearly 75% of the Fund holdings have between 90 and 100% green revenues. The Fund has no holdings in companies with less than 40% green revenues, except for bonds where the proceeds are 100% green, yet the issuing company's operations may not be.

Figure 3: Allocation to green revenues



Source: FTSE Russell, abrdn March 2023.

Figure 4: MACS allocation by green revenue bucket



Source: abrdn, FTSE Russell, March 2023.

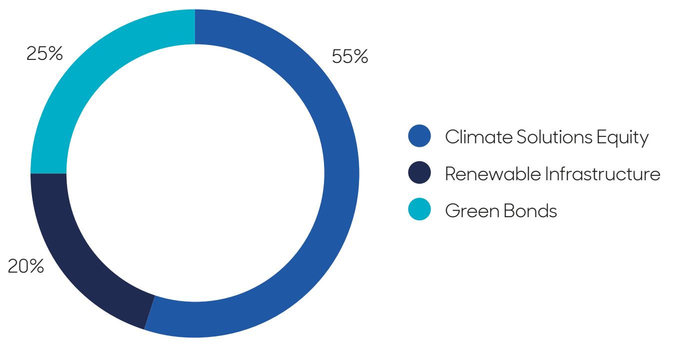
A Multi-Asset approach

Rather than investing in only a single asset class (equities, for example), the Fund takes a Multi-Asset approach, investing in climate solution equities, green bonds and bonds of green issuers, and renewable infrastructure companies.

The ability to diversify across asset classes (as well as across themes and securities) means that it can maintain a very high allocation to the climate theme without the high level of volatility that often accompanies clean technology companies.

Figure 5: Example long-term asset allocation

%

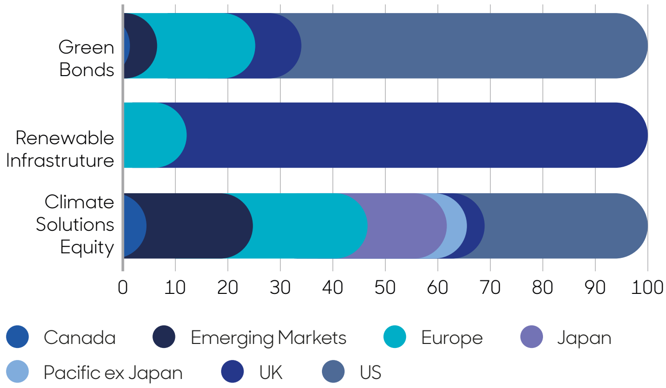


Source: abrdn, March 2023.

Example Asset Mix by Region

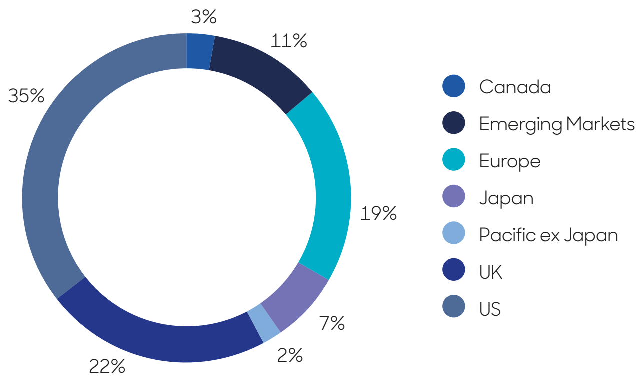
Figure 6: Investment by Asset Class

%



Source: abrdn, March 2023.

Figure 7: Whole portfolio regional allocation



Source: abrdn, as of March 2023.

The climate solutions growth opportunity

Climate solutions are an attractive investment opportunity because an investment in the equities or bonds of companies that provide them is likely to see rapid growth in the coming decades. The following charts provide two key examples that illustrate the rate of this projected growth. The single biggest investment focus for the Fund is currently clean power.

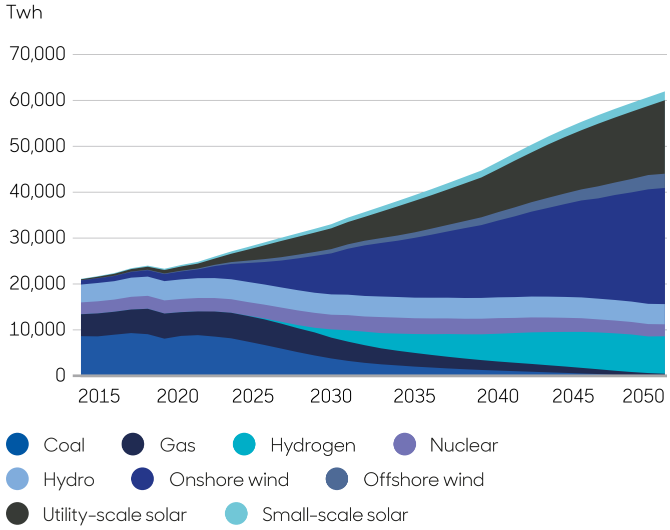
As Figure 8 shows, renewable power is expected to grow from a small share of power generation today, to become the dominant source of electricity in the 2040s. This represents more than 20-fold growth over the period.

Another key investment area is electric vehicles (EVs) and their supply chain (Figure 9). There is projected to be a similar growth rate in the uptake of electric vehicles over the coming decades.

This will drive rapid expansion in the range of industries that contribute to the development of renewable power and EVs such as wind turbine and solar panel manufacturers, battery storage and smart grids, electric motors and charging infrastructure.

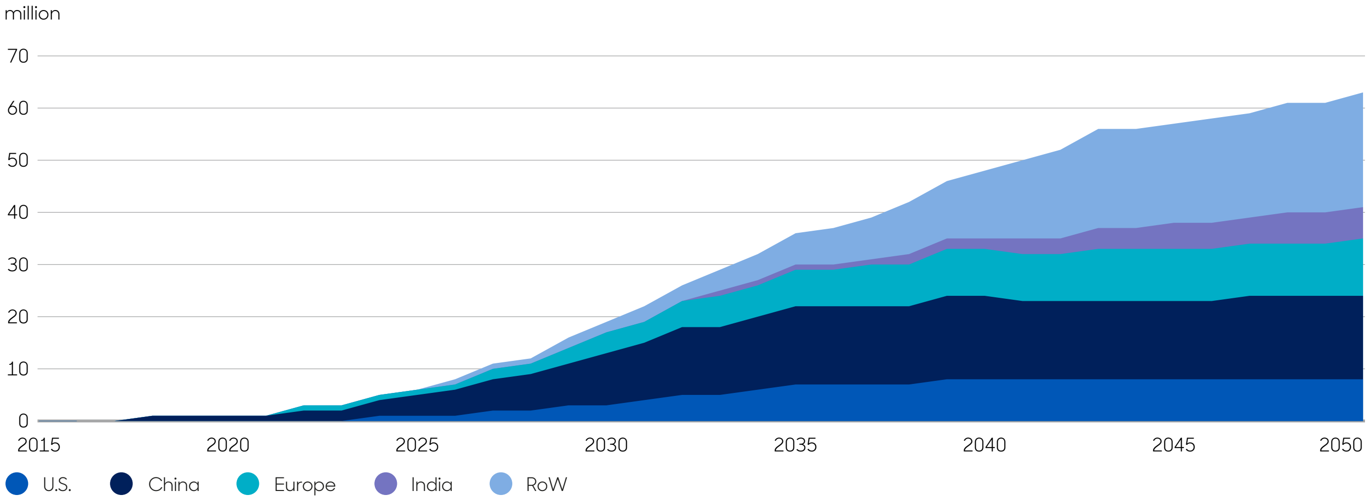
Over time, we believe similar opportunities will emerge in many other parts of the world economy where carbon is currently generated. The Fund aims to systematically search for investment opportunities in each of these areas.

Figure 8: Global electricity generation, NCS-CEHP



Source: BNEF, March 2022.

Figure 9: Electric passenger vehicle sales, by region

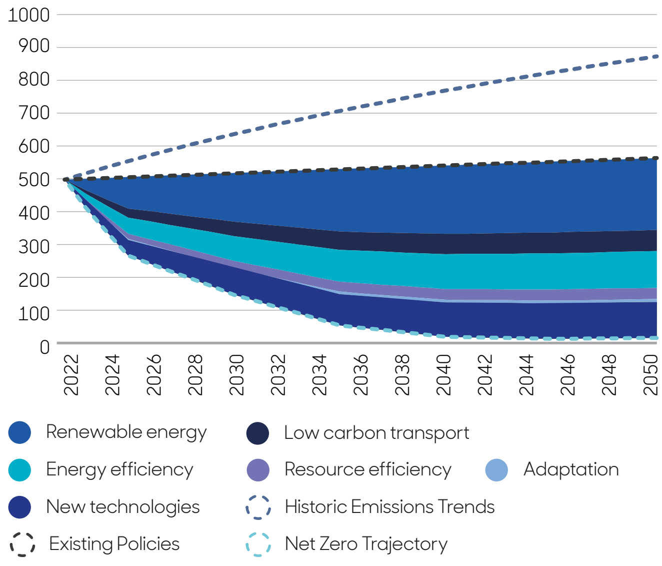


Source: BNEF, March 2022.

We show in Figure 10 how the climate solution themes in which we invest contribute to a Net Zero outcome. It starts with a 'Current policies' scenario, and then shows how different technologies can help us keep to a pathway consistent with the Paris agreement to limit the increase in the global average temperature to below 1.5°C above pre-industrial levels which requires net zero emissions by 2050. We can see that the sectors and technologies the MACS Fund targets are vital to meeting this target, but there will need to be new technologies to achieve this target as well.

Figure 10: MACS themes contribution to Net Zero decarbonisation (illustrative, indexed to 500 at 2022)

Scope 1 & 2 Absolute Carbon Emissions (2022=500)



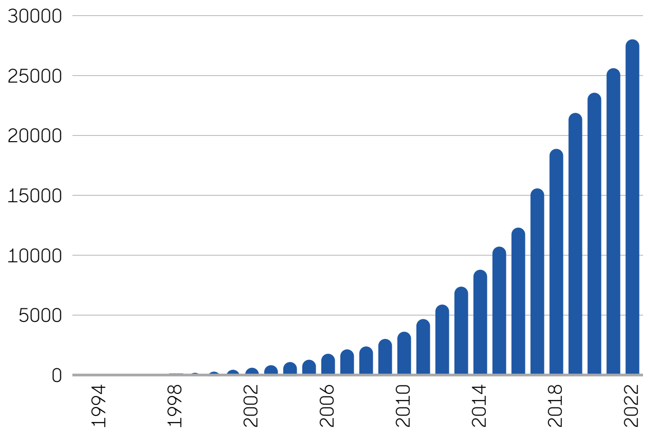
Source: abrdn, IEA, March 2023.

One way to measure the positive impact of the MACS Fund is to measure the emissions that have been avoided as a result of the activities of the companies in which the Fund invests. For example, you can work out the carbon emissions saved by replacing a coal power station with a wind farm, though the calculation required to estimate this is complex. The data required are not widely available, but we have been able to make estimates for around 30 companies in our portfolio (Figure 11).

Developing agreed standards for 'avoided emissions' is an active area of research. We are pursuing this project as part of our new joint Centre for Investing Innovation with the University of Edinburgh.

Figure 11: Avoided emissions for selected MACS Equity Holdings

ktCO₂e



Source: BNEF, abrdn, March 2023.

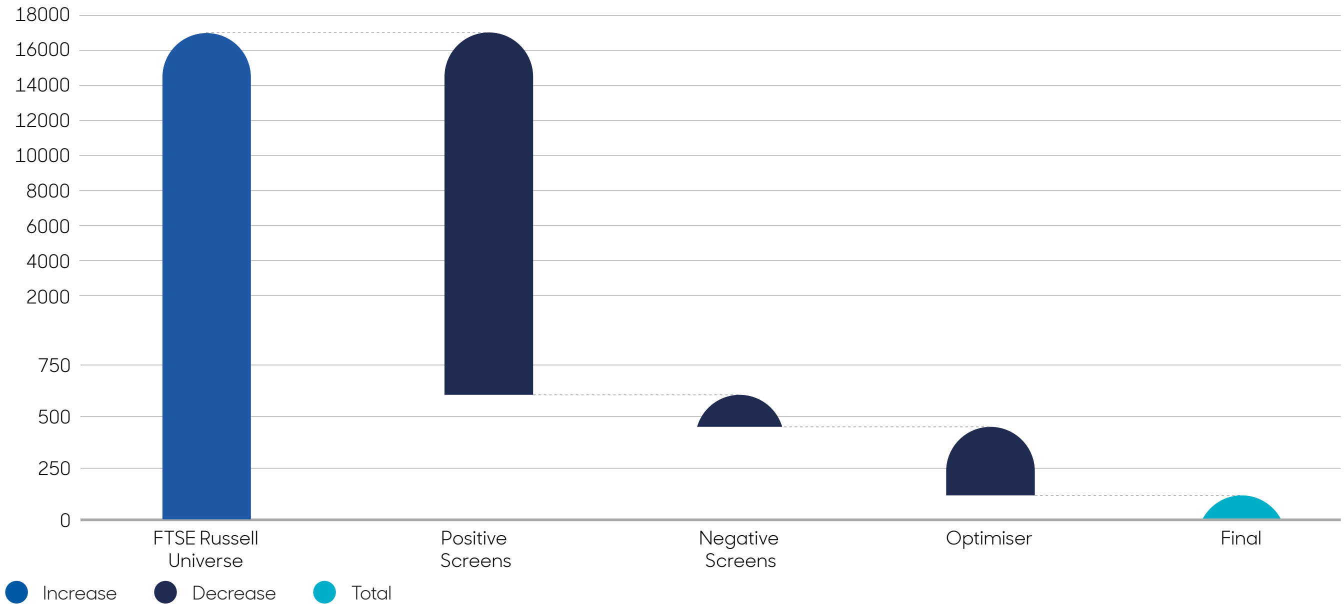
MACS exclusion policy

The Fund's main screening approach is 'positive'. We aim to invest only in the equities and bond of companies whose products and services are positively driving the transition to Net Zero. However, we also employ a negative screening approach. We want to make sure that the Fund does not inadvertently invest in companies which are engaged in problematic activities in the rest of their business. We apply a series of negative screens to exclude companies with a material involvement in fossil fuels, unsustainable biofuels, carbon intensive activities as well as ethically controversial activities such as tobacco, arms manufacturing and violation of human and labour rights and other international norms.[7]

As Figure 12 shows, we start with the FTSE Russell universe of 17000 companies. We then apply our positive screen and select companies with more than 40% green revenues. This reduces our universe of possible holdings to approximately 500 companies. Among the companies not selected by our positive screen are all the world's tobacco production companies, as well as nearly all its arms manufacturers and oil companies. The negative screens remove a further 150 or so names. As Figure 13 shows, the negative screens that remove the most names from the universe include exposure to fossil fuels and also companies operating in countries with a high corruption risk. Our last step is to take into account style and liquidity constraints, with the final portfolio comprising approximately 120 companies.

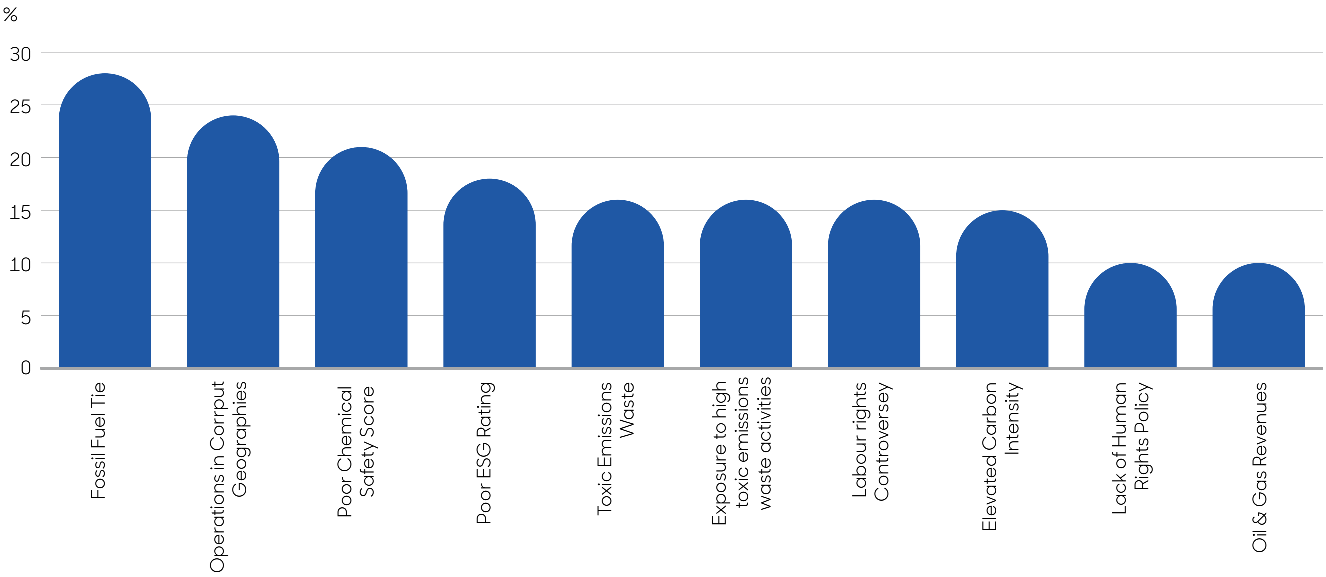
[7] Details of the exclusions, and the thresholds we apply, are available upon request.

Figure 12: Impact of screens on investible universe: number of investible companies excluded by each screen type



Source: abrdn, March 2023.

Figure 13: Negative Screens



Source: MSCI, abrdn, March 2023.

Case study: Neoen SA

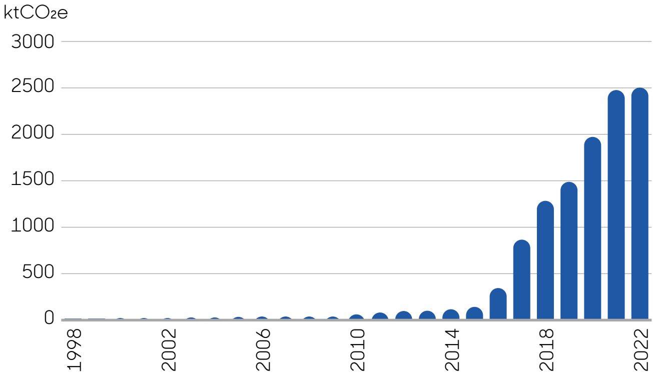
A key requirement for economy-wide decarbonisation is the increased use of renewable energy. One such provider held in MACS is Neoen. Neoen operates as an independent energy company. The Company develops, finances, builds, and manages renewable energy power plants such as solar and wind. Neoen serves customers worldwide.

One way of measuring Neoen's impact on the climate is to examine the emissions avoided each year as a result of the renewable energy facilities it has constructed. This is estimated by multiplying the electricity each facility generates by the carbon intensity of the relevant power grid. The cumulative amount avoided so far by Neoen's operations is equivalent to the annual emissions of a small economy such as Montenegro or Fiji. As Figure 14 shows, Neoen's avoided emissions are increasing rapidly as it grows its business.

Climate Solutions: Power

Feature	Figure
Listing	France
Green Revenues	60%
MSCI ESG Score	AAA
Scope 1&2 carbon intensity vs sector (Utilities)	178 vs 1832 $tCO_{2}e$/$mn revenue
MACS Portflio weight	0.70%

Figure 14: Neoen SA Avoided Emissions



Source: BNEF, abrdn, March 2023.

SDG alignment:

Case study: AB Volvo green bonds

Many traditional vehicle manufacturers are rapidly migrating their vehicle fleets from traditional internal combustion engines to electric vehicles. This is capital intensive and green bonds provide a potential source of finance. MACS targets such developments, with one example being Volvo. In 2017 Volvo was the first major car company to commit to total electrification with a target of reducing emissions by 40% by 2025 and achieving net zero by 2040.

In 2020 Volvo launched its first green bond issue of 500m euros, 2.5% yield, maturity 10/07/2027. The proceeds of this bond were used to fund the design, development and manufacturing of fully electric cars; by 2025 Volvo has committed to 50% of their sales by volume being fully electric. Volvo has also stated that every new car launched from 2019 onwards would have an electric motor.

The proceeds of this green bond have been reserved exclusively for 100% electric cars; the distribution of these finances to Hybrids/Plug In Hybrids/Conventional ICE and Fossil Fuel equipment is strictly prohibited.

Climate Solutions: Transport

Feature	Figure
Listing	Sweden
Green Revenues	100%
MSCI ESG Score	BBB
Scope 1&2 carbon intensity vs sub industry (Automobile manufacturers)	10 vs 46 tCO_2e/$mn revenue
MACS Portflio weight	0.70%

SDG alignment:

Portfolio carbon intensity

Today, many investors assess the carbon footprint of their portfolio by calculating the weighted average carbon intensity of the companies it holds, this is defined as scope 1 & 2 absolute carbon emissions divided by a company's revenue in $mn. Some portfolios aim to make this carbon footprint as small as possible. This isn't the core goal of MACS. The Fund aims to reduce its carbon intensity, but its main contribution to climate change is allocating capital to climate solutions. The core purpose of these technologies is to enable the world economy to reduce its carbon footprint.

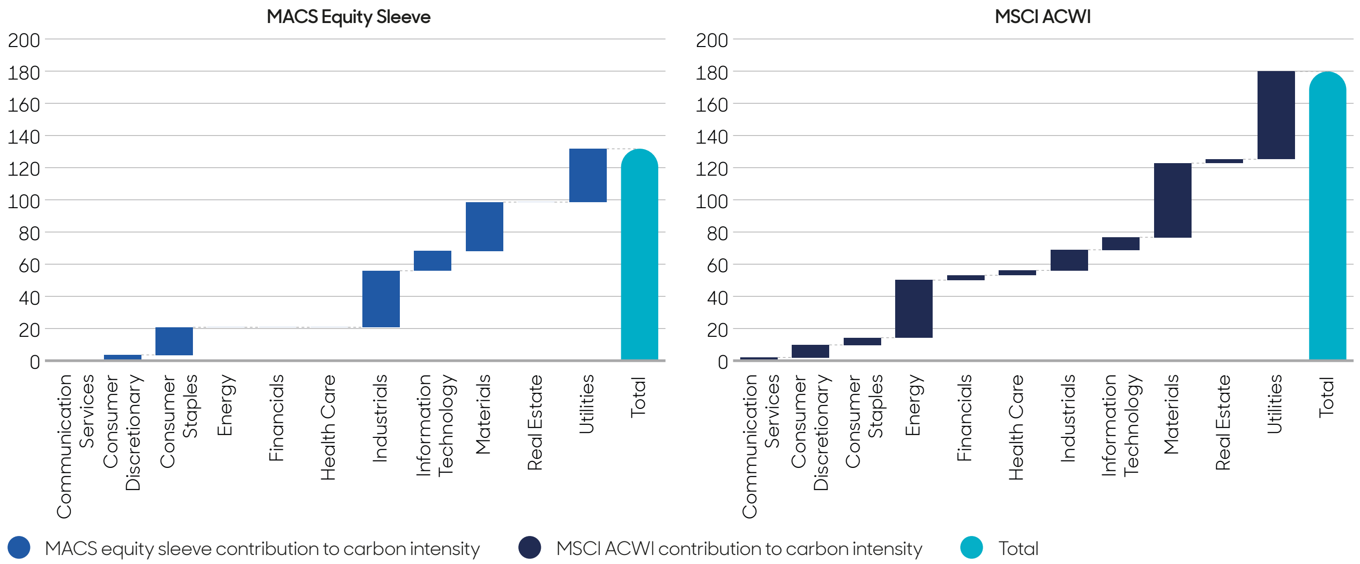
It is hard for climate solutions funds to have extremely low carbon footprints because making climate solutions products – electric vehicles, wind turbines, batteries – typically involves manufacturing and this is typically a carbon intensive activity relative to 'office-based' activities such as financial services, healthcare or software development. However, though carbon may be emitted by climate solutions companies, their products or services typically save much more carbon over their lifetime than is produced during their manufacture.

The carbon emitted making a wind turbine is dwarfed by the carbon saved during its lifetime.

While the MACS Fund is not low carbon in an absolute sense, it does aim to ensure that the portfolio carbon footprint is lower than that of a traditional global equity index. Currently, the Fund's equity portfolio has a Weighted Average Carbon Intensity (WACI) approximately 25% lower than that of a traditional global equity index such as MSCI World.

Figure 15: Weighted Average Carbon Intensity (WACI) by Sector

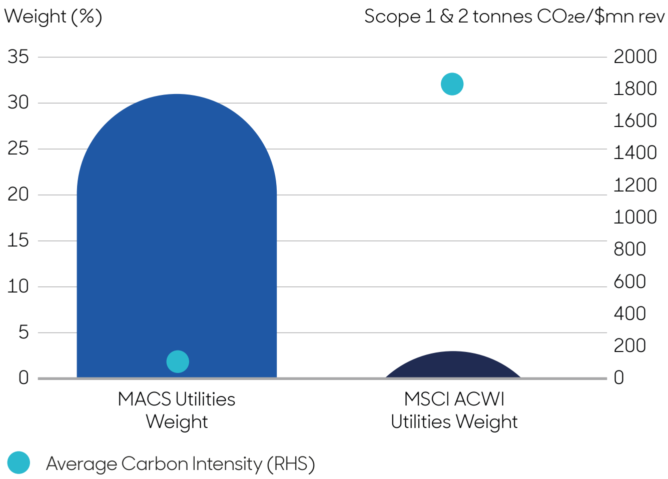
Scope 1+ 2 tonnes CO_2e/$mn rev



Source: Trucost, abrdn, March 2023.

Figure 16 shows the carbon intensity of MACS' Utilities sector and the reduction we achieve through stock selection. The Fund is overweight the electric power utilities sector, which is one of the most carbon intensive sectors of global equity benchmarks with a Scope 1 & 2 WACI of nearly 2000 tonnes CO_2e/$mn revenue. However, within this sector, MACS invests in the very lowest carbon companies, thereby helping to neutralise the sector's high carbon exposure; electricity providers using solar sources have a much lower emissions profile than those burning fossil fuels to provide the same amount of electricity. This is one of the key drivers of MACS' lower carbon emissions relative to global equities.

Figure 16: Carbon intensity of Utilities holdings in MACS vs Utilities sector in MSCI ACWI



Source: Trucost, Bloomberg, abrdn, March 2023.

Climate transition risk

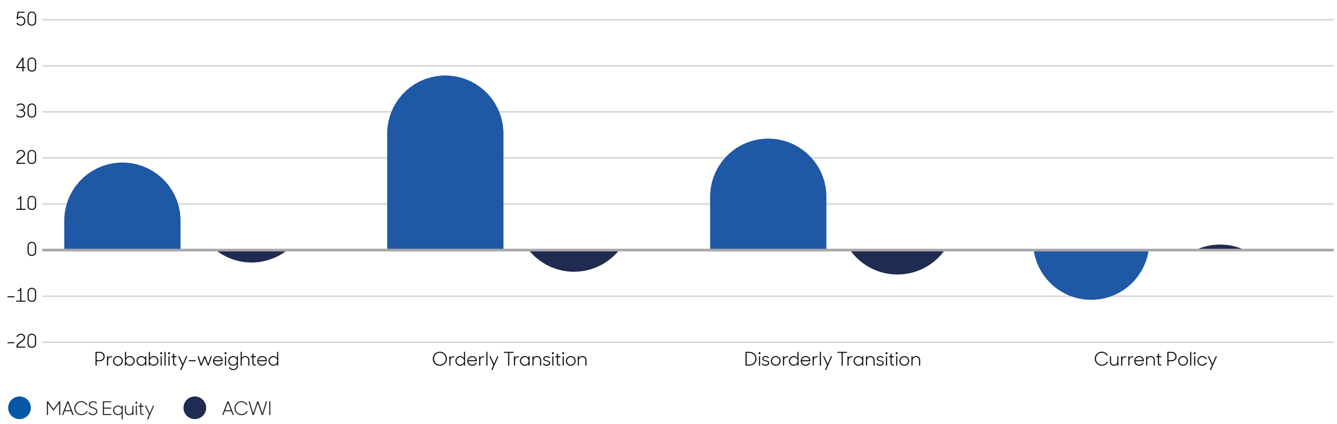
MACS aims to be heavily exposed to the climate solutions theme. The investment performance of this theme is the main source of long-term investment risk for the Fund. Financial regulators around the world are now encouraging investors to use climate scenario tools to assess this kind of investment risk. abrdn has partnered with Planetrics, a climate scenario company and a subsidiary of McKinsey, to develop a range of climate scenarios. We have analysed the MACS portfolio using these scenarios to see how it performs compared to a standard equity index.

Figure 17 shows the estimated impact of different climate scenarios on the value of MACS' equity holdings. A positive number implies future upside, whereas a negative number is downside risk; we believe the figures are what you might expect of a climate solutions fund. The Fund's investment performance is particularly strong in scenarios where governments move more aggressively to combat climate change (Orderly Transition). MACS' equity performs worse than a standard global equity benchmark in a world that sees no additional strengthening of climate policy (Current Policy in Figure 17), consistent with 3.2 degrees warming by 2100. In consultation with climate experts we have assigned probabilities to our full range of climate scenarios; we believe the Current Policy scenario is very unlikely, and have therefore assigned just 0.25% to it.

More relevant is the probability-weighted scenario which includes all the possible outcomes we have identified. MACS performs well in this average scenario, and much better than the equity index. In fact, MACS performs a lot better than global equities in a substantial majority of plausible climate transition scenarios, given demand for the products and services our holdings provide is likely to increase in a lower-carbon economy.

Figure 17: Climate scenarios

% valuation impairment



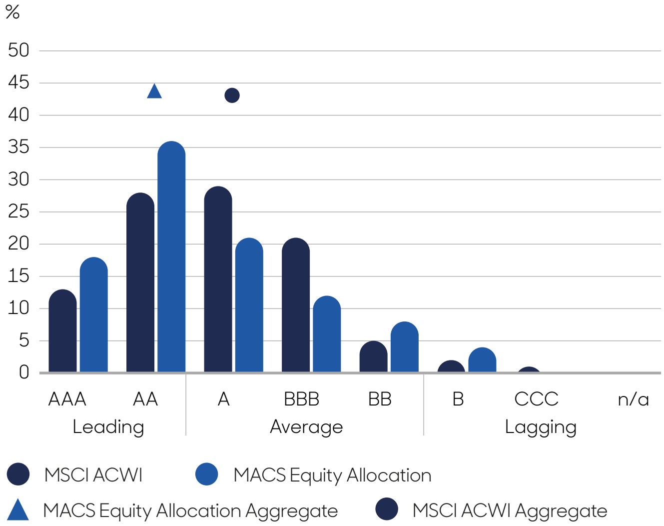
Source: Planetrics, abrdn, March 2023.

ESG ratings

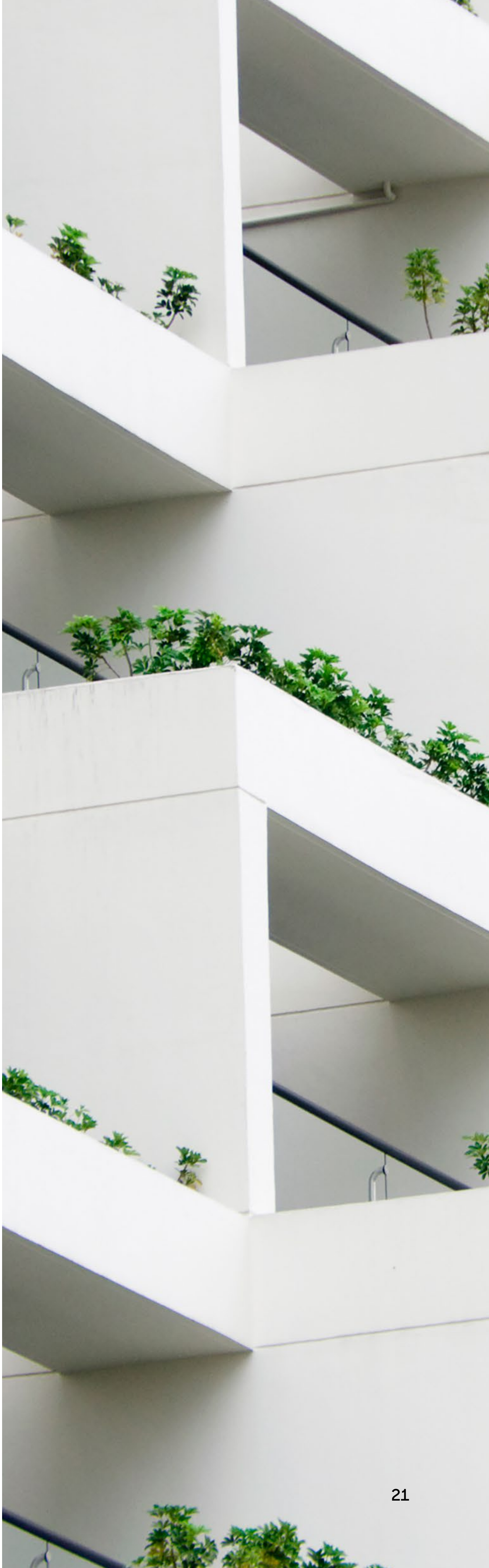
One way that investors assess companies' operational performance on environmental, social and governance (ESG) issues is to use ESG ratings. These assess companies on a wide range of factors within each of the E, S and G pillars. MACS' primary focus is on products and services – the climate solutions – companies provide, rather than their operational ESG performance. Nevertheless, we also ensure that the Fund avoids companies with poor ESG performance (we will not invest in companies with a CCC rating) and it is useful to monitor the overall ESG profile of our holdings using MSCI's ESG ratings.

Figure 18 shows the distribution of ESG ratings for the Fund compared to a standard equity index (MSCI ACWI Index). The Fund has a much higher weight in AAA and AA rated companies than the index, and overall the companies in the Fund have a higher average rating of AA compared to A for the MSCI ACWI.

Figure 18: ESG scores



Source: MSCI, abrdn, March 2023.



Sustainable Development Goals alignment

In 2015, the worlds governments committed to a number of Sustainable Development Goals (SDGs) organised into 17 'pillars'. While the SDGs are primarily aimed at governments, investors are now starting to evaluate how fund holdings map onto these different pillars.

Many of the revenues generated by our holdings align to multiple SDGs, and therefore it is often difficult to estimate a direct percentage alignment to each SDG given issues with double-counting; an electric-vehicle company can contribute both to the sustainable city goal alongside affordable and clean energy.

We therefore have made use of internal estimates alongside external data providers to estimate strongest alignment to the SDGs listed in Figure 19. SDGs 7 and 11 are related to affordable and clean energy, alongside sustainable cities, which we believe is directly addressed by our investments in renewable power and low-carbon transport. Some of our Energy Efficiency holdings operate in the Water Utility sector, enhancing the energy usage around water provision, which we believe directly addresses SDG 6.

It is important to note that measuring the SDG alignment of investments is a relatively new area and methodologies are in their infancy.

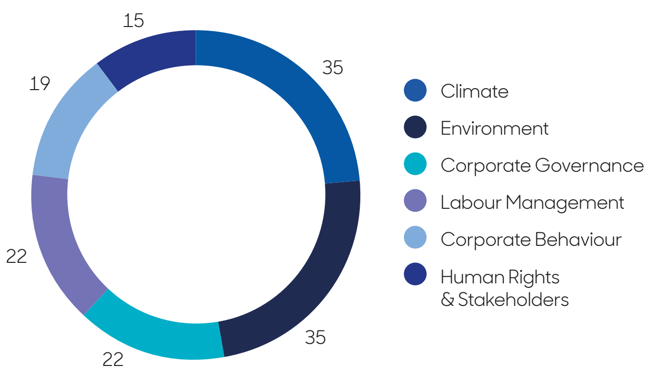
Figure 19: MACS SDG Alignment

Company engagement and voting

One way investors can achieve sustainability objectives is via engagement with company boards to encourage stronger ESG policies. MACS participates in abrdn's engagement and shareholder voting programmes. Although the Fund deliberately excludes most of the more problematic business sectors (e.g. mining, oil and gas, tobacco, weapons) engagement remains very important for MACS.

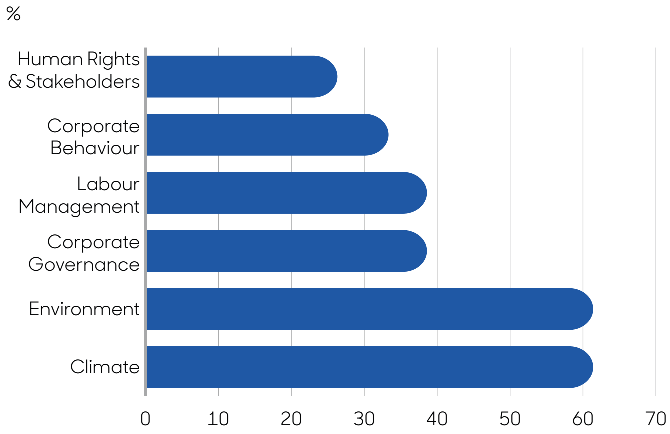
Data on engagement by topic

Figure 20: Number of MACS ESG meetings to discuss specific topics (01 Jan 2022 – 31 Dec 2022)



Source: abrdn, March 2023.

Figure 21: Percentage of MACS meetings where each topic was discussed



Source: abrdn, March 2023.

Data on voting for MACS holdings

Metric	Data
Number of meetings held	122
Number of meetings with at least one vote against management	72
Percentage of meetings with at least one vote against management	59.0%
Total number of votable proposals	1625
Number of votes against management	198
Votes against management as a percentage of votable proposals	12.2%
Number of votes against ISS policy	100
Votes against ISS policy as a percentage of votable proposals	6.2%
Number of votes against policy	27
Votes against policy as a percentage of votable proposals	1.7%
Number of absentations in any resolution	14
Resolution abstentations as a percentage of votable proposals	0.9%

Source: abrdn, March 2023.

Conclusion

This is the second MACS Sustainability Report. We hope it has provided a rounded picture of the sustainability contribution of the Fund, assessing its performance along a range of dimensions.

Regulators are significantly strengthening mandatory reporting requirements for funds. For example in the UK, the Sustainable Disclosure Requirements (SDR) regime is very likely to improve and enhance the disclosures of key sustainability funds. This means that in future our customers will be able to compare the MACS Fund's sustainability performance more directly with others. Given that our goal is to focus client capital on climate solutions, we hope and expect that in future years, we will be able to show that this Fund offers clients a focused approach to investing in climate solutions.

Climate Advisory Group

The Fund benefits from the insights of an advisory board, formed of external climate experts, representatives of The Big Issue Group (TBIG) and abrdn. It exists to provide a forum to discuss, challenge and agree the climate framework that supports the abrdn Multi-Asset Climate Solutions Fund.

Group members and bios

Independent chair

Matthew Brander

Matthew is a Senior Lecturer in Carbon Accounting at the University of Edinburgh's Business School. His current research focuses on the development of methods for corporate, product (life cycle assessment), project and policy-level greenhouse gas accounting. He has a particular interest in the quantification of avoided emissions and the alignment of financial flows with the Paris Agreement. He has served as a member of several technical working groups for the Greenhouse Gas Protocol, and the International Organisation for Standardisation (ISO), and is on the peer review panel for the UK government's emission factors publication for company reporting, and the Advisory Board for the Woodland Carbon Code. Prior to his current position Matthew worked for over seven years in carbon management and greenhouse gas assessment at the Edinburgh Centre for Carbon Management, and at Ecometrica.

TBIG representative

Nigel Kershaw OBE

Nigel is Chair of The Big Issue Group and co-founder of Big Issue Invest and The Big Exchange where he is a Director and also chairs the Impact Committee. He is co-creator and member of the Social and Climate Advisory Boards of Columbia Threadneedle UK Social Bond Fund and abrdn Multi-Asset Climate Solutions Fund.

Climate experts

John Fleetwood

John is a Sustainable Investing Consultant and founder of fund impact rating company, Ethical Money Limited (sold to Square Mile Research & Consulting). 30+ years experience of Responsible & Sustainable Investing and an innovator in developing new products and services in the field, including a pioneering ethical investment advisory firm and an ethical discretionary wealth management service.

Karen E. Wilson

Karen is Senior Advisor on sustainability and impact strategies working with a range of firms and financial institutions. She bridges the private, public and academic sectors, including leading work on impact investment and impact measurement at the OECD and co-leading the launch of the Impact Management Platform, which aims to provide coherence on sustainability standards for companies and investors.

She Chairs the Supervisory Board of the Impact Linked Finance Fund and the Adjudicating Panel of the Earth Foundation's Earth Prize. She also serves on the Climate Advisory Group of the abrdn Multi-Asset Climate Solutions Fund and the Social Advisory Group of the Columbia Threadneedle UK Social Bond Fund. In 2022, she was selected by the Sorenson Impact Center as a Global Impact Leader.

Karen is a Senior Advisor and Sustainability/ESG Lead at the Institute of Strategy at the Stockholm School of Economics in Riga, where she also is a Visiting Lecturer. In addition, she is an Associate Fellow at Said Business School at Oxford University and teaches at universities in France and Switzerland. She received, with honors, a Bachelors of Science in Mathematics and Management from Carnegie Mellon University and an MBA from Harvard Business School.

Jouja Maamri

Jouja is the Head of Gulf Partnerships at Save the Children, the world's leading organization for children. She was previously Director of Climate Philanthropy at Impatience Earth, a philanthropic advisory firm that engages with wealth holders to help them respond to the urgency of the climate crisis.

She was formerly the Director of Impact at Regenerative Group, an impact investment fund investing in companies that enable a better and more sustainable world. She was also the UK's Delegate to the 2021 G7 Youth Summit where she represented UK youth on issues of Climate & Environment and co-led the Future Leaders Network's delegation to COP26.

Jouja is a Trustee at the New Economics Foundation, and sits on the Crisis' Venture Studio Advisory Board, as well as Social Finance's Racial Equity Advisory Group and The Big Issue's Climate Advisory Group. Jouja holds a BA in Political Science & Human Rights from Columbia University and an MSc in Migration Studies from the University of Oxford.

abrdn representatives

Craig Mackenzie

Craig is Head of Sustainability for Multi-Asset Solutions at abrdn. He is lead portfolio manager for the Multi-Asset Climate Funds and also plays a leading role in abrdn's climate scenario group and Net Zero initiatives.

In 2008, Craig founded the Centre for Business and Climate Change at the University of Edinburgh. He also set up the Carbon Management and Climate Change Finance and Investment MSc Programmes. Craig has also been heavily involved in the Institutional Investors Group on Climate Change, including co-drafting the SAA chapter for the new Net Zero Investment Framework.

Earlier in his career, Craig established the governance and sustainability functions at Friends, Ivory & Sime and at Insight Investment he created BMO's innovative reo® ESG engagement service and helped establish and shape the Principles for Responsible Investment, the CDP and the FTSE Russell ESG index family.

Additional abrdn members of MACS Portfolio Management Team (outside of CAG)

Chris Paine – Investment Manager, Multi-Asset Solutions

Fiona Ritchie – ESG Investment Manager, Multi-Asset Solutions

David Attwood, CFA – Senior Investment Analyst, Multi- Asset Solutions

Justin Simler

Justin Simler is Head of Multi-Asset Product Strategy and Investment Specialists at abrdn having joined in September 2020. He previously worked for Tatton Investment Management and prior to that was Head of Product for Multi-Asset at Ninety One Asset Management. Before this he was Global Head of Product Management for Multi Asset and Head of Product Management for Quantitative Equity Products at Schroders.

He started at BZW (the investment banking arm of Barclays) on the graduate programme and worked as a fund manager on UK smaller companies and in Paris before moving to Bangkok as CIO for Thai Asia Mutual Funds and Head of Research for BZW KTT. He worked for Barclays Wealth in London as Head of Global and International Fund Management. Justin graduated with a First Class Degree from UCL and has an MBA from Bayes Business School of City University of London.

Eva Cairns

Eva Cairns is the Head of Sustainability Insights and Climate Strategy within the Investments Vector Sustainability Group ('IVSG') at abrdn. She is responsible for leading abrdn's Sustainability Insights team to establish abrdn's views across our key sustainability themes, including abrdn's climate strategy and approach to net zero. Eva is also actively involved in climate industry initiatives to drive forward industry best practice. Before joining the IVSG, Eva worked at Standard Life Investments and managed a team of Business Analysts, focused on projects related to the investment process, risk and research. Eva joined Standard Life Investments in 2010 from Halcrow Group Ltd (now CH2M Hill), a global engineering consultancy, where she worked as an Economist focused on environmental and socio-economic impact assessment of energy and transport projects. Eva graduated with an MSc in Economics with Distinction from the University of Edinburgh where her dissertation focused on the social cost of carbon. She also obtained the Professional Risk Management (PRM) certification in 2014.

Glossary of terms

Abatement: this refers to the act of reducing the emissions of an activity (synonymous with decarbonisation).

Carbon dioxide equivalent (CO_2e): this metric utilises global warming potentials of all the greenhouse gases as defined by the International Panel of Climate Change to calculate a single consistent metric for GHG impact in carbon dioxide equivalent terms.

Carbon Emissions - Scope 1: greenhouse gas emissions generated from sources which are owned or controlled by the company.

Carbon Emissions - Scope 2: greenhouse gas emissions generated from the consumption of purchased electricity, heat or steam by the company.

Carbon Emissions - Scope 3: greenhouse gas emissions that are a consequence of the activities of the company, but occur from sources not owned or controlled by the company, upstream and downstream of a company supply-chain. Banks and technology companies might have low Scope 1 and 2 emissions but very high Scope 3 emissions due to their lending activities and the distribution of their products and services. How to apportion Scope 3 emissions remains a significant challenge leading to the risk of over or under-counting.

Carbon emissions: used as a generic term for the main greenhouse gas (GHG) emissions (carbon dioxide, methane, nitrous oxide, F-gases) in our reporting. This is synonymous with the term carbon dioxide equivalent (CO_2e).

Carbon footprint: this measures the total amount of greenhouse gas emissions that come from the production, use and end-of-life of a product or service; or from our consumption as individuals. For portfolios this is frequently measured by EEI and by WACI.

Climate Change Scenario analysis: this analysis provides a quantitative assessment of the financial impact of a range of potential future climate change scenario pathways and related policy and technology scenarios on investments.

Current Policy Scenario: no new policy action is implemented beyond what is already in place, resulting in a global temperature rise of 3.2°C by 2100.

Disorderly transition: the implementation of strict policy action is delayed until 2030, resulting in a disorderly transition and a global temperature rise of 1.9°C by 2100.

Early Action Scenario ('orderly' transition): strict and immediate policy action is put in place and is steadily ramped up to achieve an orderly transition that results in a global temperature rise of 1.7°C by 2100.

Economic Emissions Intensity (EEI): this is a normalised carbon intensity metric, expressed as tCO2e/million USD invested. The portfolio weight of each holding is multiplied by the ratio of the investee company's emissions divided by the investee company's enterprise value including cash (EVIC). This is equivalent to dividing the portfolio Financed Emissions by the portfolio's AUM.

Enterprise value including Cash (EVIC): this is a denominator used in both the Financed Emissions and Economic Emissions Intensity, EVIC is equivalent to the traditional financial measure of EV, however, it does not deduct cash.

ESG Integration: the inclusion of ESG considerations as part of investment analysis and decision making. It involves assessing both the risks and opportunities of a range of ESG-related factors that may affect the performance of our investments.

Exclusions: companies and sectors that will not be invested in by the portfolio due to business activities that are deemed unsuitable for the portfolio outcome or underlying investor. For tobacco companies.

Financed Emissions: this is the absolute tonnes of carbon dioxide equivalent (tCO_2e) that is attributed or 'owned' by an investors, based on the value of the investment in an investee company.

FTSE Russell: a leading provider of index data that we use for green revenues.

GICS: Global Industry Classification Standard is an industry taxonomy developed by MSCI and Standard & Poor's.

Green Revenues: this is the weighted average of each issuer's percent of revenue generated by goods and services from clean technology sources such as alternative energy, energy efficiency, green building, pollution prevention and sustainable water.

Glossary of terms

Greenhouse gases: the main gases responsible for the greenhouse effect. The Earth has a natural greenhouse effect whereby the atmosphere absorbs radiation which prevents excessive cooling. The greenhouse gases whose concentrations are rising and causing climate change are carbon dioxide, methane, nitrous oxide, hydrochlorofluorocarbons (HCFCs), hydrofluorocarbons (HFCs) and ozone in the lower atmosphere.

MSCI ESG Controversies: this captures companies that have faced very severe controversies pertaining to ESG issues. The most severe cases are denoted by a "Red Flag".

MSCI ESG Rating: this assesses the resilience of a company to long term industry specific ESG risks. Highly rated funds tend to consist of issuers with leading or improving management of key ESG risks according to MSCI's methodology. It is scored from AAA to CCC.

Physical Risk Climate risks: these are associated with the physical impacts of climate change, these can be broadly categorised into acute risk (short-term impacts) and chronic risk (long-term impacts).

Probability Weighted Scenario: this is based on our latest assessment of probability across our full suite of 16 scenarios, resulting in a global temperature rise of 2.3°C by 2100.

Transition Risk Climate risks: these are associated with the transition to a low-carbon economy. They include, demand creation, demand destruction, technology risk, carbon price risk, market risks etc.

Trucost: a leading provider of carbon data.

UN Global Compact: a global corporate sustainability initiative, calling on companies, investors and other participants to align their strategies and operations with universal principles on human rights, labour, environment and anti-corruption.

Weighted Average Carbon Intensity (WACI): this is a normalised carbon intensity figure, expressed as tCO_2e/million USD revenue. The portfolio weight of each holding is multiplied by the ratio of the investee company's emissions divided by the investee company's revenue.

Important Information

Investment involves risk. The value of investments and the income from them can go down as well as up and an investor may get back less than the amount invested.

Risk factors you should consider prior to investing:

- The value of investments and the income from them can fall and investors may get back less than the amount invested.
- The fund invests in equity and equity related securitiesThese are sensitive to variations in the stock markets which can be volatile and change substantially in short periods of time.
- The fund invests in securities which are subject to the risk that the issuer may default on interest or capital payments.
- The fund price can go up or down daily for a variety of reasons including changes in interest rates, inflation expectations or the perceived credit quality of individual countries or securities.
- The fund invests in emerging market equities and/or bondsInvesting in emerging markets involves a greater risk of loss than investing in more developed markets due to, among other factors, greater political, tax, economic, foreign exchange, liquidity and regulatory risks.
- The use of derivatives carries the risk of reduced liquidity, substantial loss and increased volatility in adverse market conditions, such as a failure amongst market participantsThe use of derivatives may result in the fund being leveraged (where market exposure and thus the potential for loss by the fund exceeds the amount it has invested) and in these market conditions the effect of leverage will be to magnify losses.
- Dividend payment policies of the REITs in which the fund invests are not representative of the dividend payment policy of the fund.
- Investing in China A shares involves special considerations and risks, including greater price volatility, a less developed regulatory and legal framework, exchange rate risk/controls, settlement, tax, quota, liquidity and regulatory risks.
- More details of the risks applicable to this fund can be found in the Key Investor Information Document (KIID) and Prospectus, both of which are available on request or at our website abrdn.com. The fund is a sub-fund of Aberdeen Standard OEIC V, an authorised open-ended investment company (OEIC).

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