
West Yorkshire Pension Fund
Climate Report
2025

Contents

1 Foreword

Climate change is no longer a distant threat, but an urgent and pervasive reality. The evidence is irrefutable: from the escalating frequency and intensity of extreme weather events to the gradual erosion of biodiversity, the impacts are profound and far-reaching. As stewards of our members' pensions, West Yorkshire Pension Fund (WYPF or 'the fund') recognises an imperative to integrate climate considerations into our investment processes. This report is a significant step in that journey.

Through our investment pool, the Northern LGPS (NLGPS), we have made a commitment to decarbonise by 2050. The Net Zero Asset Framework 2.0 (NZIF 2.0) provides clear guidance to align our investment strategies with the goal of limiting global warming to 1.5°C. By adopting this framework, we committed to a rigorous and transparent approach to decarbonising our portfolios while maintaining appropriate risk adjusted returns. We acknowledge the enormity of the challenge: the annual owned emissions of the fund (Scopes 1,2 & 3) are c9mn tonnes of CO_2, 50% greater than the annual emissions of all the motor vehicles registered in West Yorkshire.[1]

The International Energy Agency (IEA) World Energy Outlook 2024 [2] underscores the urgency of the challenge: the world is not on track to achieve net zero emissions by 2050. This stark reality needs a fundamental shift in investment priorities.

This document has been produced to allow the reader a better understanding of the climate risk facing the fund, the mitigating actions we are taking to reduce such risk, as well as delivering real-world decarbonisation through the companies in which we invest. It is our hope that this document will serve as a resource for our members, employers, and other stakeholders as we collectively work towards a low-carbon economy.

Regards,

Cllr Andrew Thornton
Chair, West Yorkshire Pension Fund

1 Scope 3 emissions in 2024 of 9mnt CO_2e vs. 3mn cars registered in West Yorkshire emitting an average of c2t CO_2e annually.

2 **World Energy Outlook 2024**

2 Introduction

WYPF is one of the largest of the 86 Local Government Pension Scheme (LGPS) funds in England and Wales with assets of c£20bn. As of 31 March 2024, WYPF had 323,414 members and 409 active employers across the UK. Our largest employers are the five West Yorkshire Councils: Bradford, Calderdale, Kirklees, Leeds, and Wakefield. WYPF also hosts a shared service pension administration function for three other LGPS funds and 24 regional fire authorities, covering in total over 500,000 members.

A fundamental part of our approach to portfolio management is a recognition that Environmental, Social and Governance (ESG) factors can profoundly affect an individual company's long-term sustainability. The ESG profile of a company reflects an array of individual characteristics ranging from the nature of its supply chain, the composition of its board, management's attitude toward unionisation and the carbon intensity of its business. We understand that the importance of individual factors varies between companies and sectors and therefore we seek to focus on material factors likely to make a long-term impact on the business. The assessment of a company's ESG characteristics is a fundamental part of our investment process.

WYPF believes that climate change is an existentialist threat to humanity. Climate change has the potential to directly impact the value of the fund in two main ways: the physical impact that rising sea levels, the increasing frequency of extreme weather conditions and higher temperatures may have on a company's assets, workforce, or markets. Secondly, the risk that the transition to a low carbon economy may 'strand' certain assets or businesses by making them uneconomic owing to changes in policy, regulation, technology, or customer preference.

We believe that carbon intensive companies must swiftly formulate and implement strategies to aggressively curtail green-house gas emissions. The transition to the low carbon economy presents not only risks, but also opportunities for the fund and we actively look to invest in low carbon and renewable energy technologies. Our approach to Responsible Investing is described more fully in our **Investment Strategy Statement (ISS)** and **Stewardship Report**.

In 2021 WYPF, via the Northern LGPS pool, committed to abide by the **Paris Aligned Asset Owners** (PAAO) goal to decarbonise the fund by 2050.

This document has three sections:

- The current carbon footprint of the fund, describing geographic, sector and company exposure and current trends.
- The initiatives that we are taking to decarbonise the fund consistent with the NZIF2.0 and how are we progressing toward these goals.
- How our governance, policies, and strategy align to the Task Force on Climate Disclosures (TCFD) recommendations.

3 Governance and Strategy

3.1 Purpose, Aims and Beliefs

The purpose of WYPF is to invest the contributions received from local government employers, employees, and other designated entities, to generate a financial return sufficient to pay the pensions of our members.

The aims of the fund are to:

- Enable employer contribution rates to be kept as stable as possible and at reasonable cost, whilst maintaining the solvency of the fund.
- Manage employers' pension liabilities effectively and ensure that sufficient resources are available to meet such liabilities as they fall due.
- Maximise the returns from investments within reasonable risk parameters.

WYPF has developed the following shared investment beliefs:

- WYPF is inherently long-term in its attitude to risk and return to reflect the duration of the liabilities of the fund.
- The Fund invests in a diverse range of instruments including UK and international equities; sovereign and corporate bonds; private equity and credit; infrastructure; real estate; and alternatives.
- WYPF believes in actively managing the fund and chooses to do this via an in-house investment team, with most of the assets of the fund directly invested in securities. In those instances when the fund does not believe it can secure internal resources to manage specialised investments directly, it will seek external expertise, either through the Northern LGPS pool, or third-party managers.
- The Fund recognises the importance of being a responsible asset owner and believes assets' specific Environmental, Social and Governance (ESG) characteristics will determine their long-term sustainability. WYPF is a signatory of the **UK Stewardship Code**.

3.2 Governance

Each LGPS fund has its own governance arrangements, which are the responsibility of the administering authority to each fund. Since 1986 WYPF has been administered by the City of Bradford Metropolitan District Council (CBMDC.) The governance arrangements of the fund and relationship with the CBMDC, are detailed in the fund's **Governance Compliance Statement**. The governance structure is designed to deliver effective oversight through strong stakeholder representation and engagement, clear division of responsibilities, effective reporting, and transparency.

WYPF has the following governance beliefs to support the investment strategy. These include:

- WYPF aims to be at the forefront of best practice for LGPS funds: this means striving to ensure compliance with the legislation and statutory guidance, as well as acting in the spirit of wider relevant guidelines and best practice guidance for pensions and investments.
- WYPF clearly articulates its goals and how it intends to achieve those objectives through business planning, continually measuring and monitoring success.
- All staff and committee members charged with financial administration, decision-making or investment oversight of WYPF should be fully equipped with the knowledge and skills to discharge the duties and responsibilities given to them.
- WYPF is committed to communicating with its stakeholders and other interested parties in a clear and transparent manner.

CBMDC delegates all its relevant functions to its Governance and Audit Committee that in turn uses three groups, see Figure 1, to administer WYPF:

- The Joint Advisory Group (JAG) has overall responsibility of establishing and implementing a suitable funding plan as well as overseeing and monitoring its administration. The JAG meets at least biannually.

- The Investment Advisory Panel (IAP) has overall responsibility for establishing and implementing a suitable investment strategy as well as overseeing and monitoring the management of WYPF's investment portfolio and investment activity. The IAP includes elected members from each of the five West Yorkshire metropolitan authorities, plus three independent advisers, trades union representatives, active and retired member representatives, the Managing Director (MD) of WYPF and (on a rotating basis) the Director of Finance from one of the five West Yorkshire authorities. The IAP is supported by the in-house investment team, led by the Chief Investment Officer (CIO). Updates on ESG matters are presented to the IAP on a quarterly basis.
- The role of the Local Pension Board (LPB) is to ensure effective and efficient governance and administration of WYPF including compliance with relevant legislation and regulation. The LPB meets at least quarterly. It is not a decision-making body, but can make recommendations to the administering authority and has a duty to make reports to Pensions Regulator in accordance with the Regulator's codes of practice and relevant guidance.

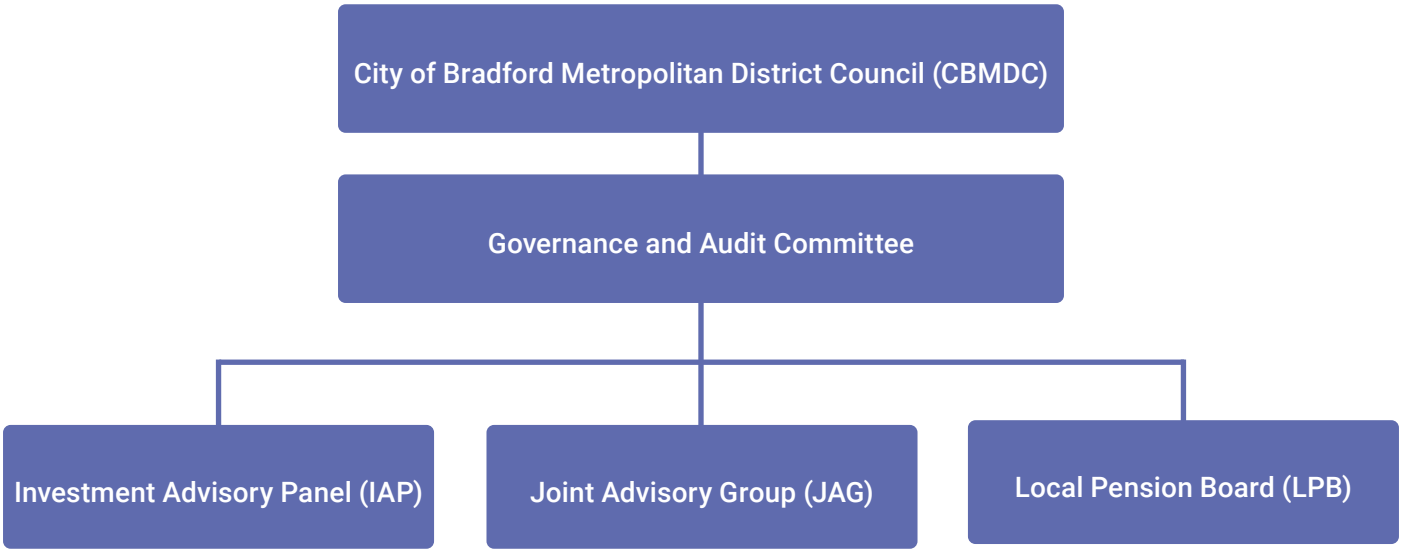


FIGURE 1: WYPF GOVERNANCE ARRANGEMENTS

As an LGPS fund, WYPF must formulate and publish an ISS describing the fund's investment beliefs and policies, this includes its attitude to Responsible Investment including climate change. The ISS is prepared by officers led by the MD and approved by the IAP. The ISS is reviewed triennially or whenever revisions are considered appropriate. The document is published on the fund's website. The ISS was most recently revised in 1Q 2024. WYPF's ISS adopts five overarching ESG Principles, as set out in Table 1.

Principle #1	WYPF recognises that Environmental, Social and Governance (ESG) factors can profoundly affect an individual company's long-term sustainability.
Principle #2	WYPF does not believe that there is a trade-off between the investment performance of a financial asset and investing in a company that is behaving in a responsible and sustainable manner.
Principle #3	WYPF chooses to be an informed and active manager.
Principle #4	WYPF recognises its stewardship responsibilities through engagement and voting.
Principle #5	Positive Engagement for Change: as owners of companies, we have the power to change the behaviour of managements who we consider our agents.

TABLE 1: WYPF'S ESG PRINCIPLES

The 2016 LGPS Investment Regulations required individual LGPS funds to pool investments to reduce costs and facilitate further investment into infrastructure assets. WYPF, in partnership with its equivalent funds in Merseyside and Greater Manchester, formed Northern LGPS (NLGPS) Pool, an LGPS Pool to provide investment services to its members. NLGPS has set up two vehicles to make collective investments in alternative asset classes: GLIL, established in conjunction another LGPS Pool, LPPI, to invest in Infrastructure projects, and NPEP, to invest in Private Equity.

In November 2024 the Ministry of Housing, Communities and Local Government launched a consulatation aimed at accelerating the consolidation of LGPS assets into pools. While the results of the consultation were unknown at the time of publication, it is highly likely that an increasing percentage of the fund's assets will be managed by Northern LGPS.

3.3 Strategy

WYPF integrates its investment beliefs, strategy and culture into specific actions through its business plan, which is published on WYPF's **website**. The annual plan is set for approval at the first JAG meeting of the municipal year and discussed at the equivalent IAP meeting. The biannual JAG meetings are the principal forum to establish and assess the progress toward business goals, the suitability of our resourcing and processes to ensure that they remain "fit-for-purpose."

The business plan is a high-level document that describes the aims and ambitions of the organisation. It forms the basis of all strategic decisions and describes how WYPF intends to implement its plan and how it is governed. In recognition that the strategic challenges facing WYPF will not necessarily coincide with our usual 12-month accounting cycle, WYPF in January 2022 adopted a rolling five-year business plan covering the period up to 2026/27. The business plan for 2025–2030 was approved at the February 2025 panel meeting.

The MD has day to day control of all aspects of implementing the business plan. The CIO assists in managing the investment management functions including asset allocation, portfolio performance measurement, and the investment process including ESG matters.

WYPF's Investment Strategy Statement includes a model portfolio which includes benchmark allocations to various assets classes, see Figure 2. The MD, assisted by the CIO, has the responsibility for asset allocation against the model and may choose to be over or underweight vs. the benchmark allocation. Each asset class has an appropriate underlying benchmark and control range of ± 3–5pp. The specific chosen asset weights reflect the judgement of how to achieve the maximum risk weighted return for the fund.

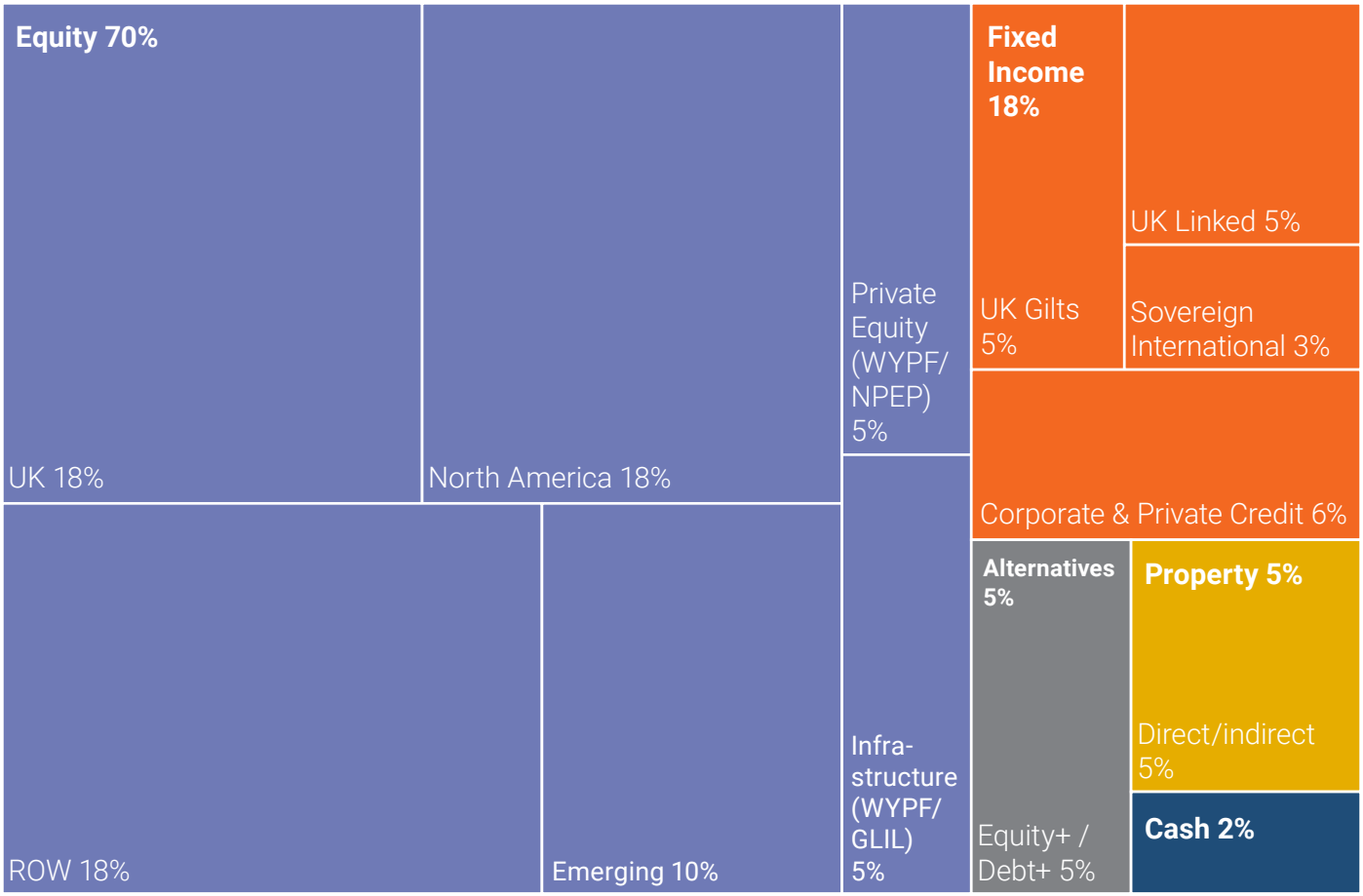


FIGURE 2: PORTFOLIO BENCHMARK ALLOCATIONS

ESG considerations are integral to our investment team's assessment process both before and after investment decisions are made. Analysing published data, research and proprietary work, the investment team will try to understand how ESG factors will impact the value of individual investments.

For external mandates, the selection process for investment managers includes a thorough review of the manager's approach to ESG. Risks are monitored over the entire life of the investment.

The fund also employs a Responsible Investment Engagement officer who has broad oversight of ESG activities including monitoring and understanding ESG challenges in the portfolio, engagement with investee companies, co-ordinating collaborative engagement activity and the reporting of ESG activities.

3.4 Risk Management

A strong understanding of the potential risks, their likelihood and potential impact on the organisation is an essential element of WYPF's business plan. Risks can broadly be classed as those facing us as an organisation or as an investor and should be eliminated, reduced, or controlled as far as possible.

To achieve this WYPF ensures that risk management is integral to the governance and management of the investments at both the strategic and operational levels. The aim is to integrate risk awareness and management into both the fund's processes and culture to help ensure that WYPF's investment goals are met. Policies will be subject to regular review to reflect risk assessments.

WYPF has an Investment Risk Management Policy to effectively manage risks which may otherwise prevent the fund achieving its objectives. Core to this policy is the development and maintenance of comprehensive risk registers, the setting out of responsibilities for the management and escalation of risks, and responsibility for the regular review and updating of Policy and Strategy. The risk management process is a continuous cycle of identifying, analysing, controlling, and monitoring to ensure the Risk Management Policy is up to-date and relevant. As an organisation we face many potential challenges including those indicated in Figure 3.

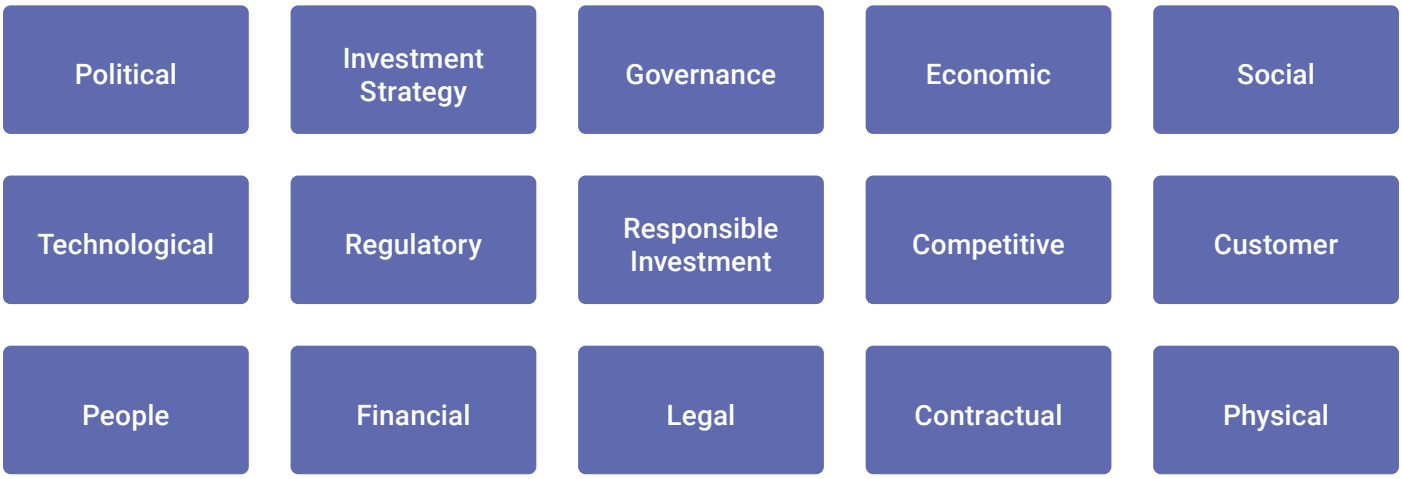


FIGURE 3: RISK CATEGORIES FACING THE FUND

Principal sources for the identification of risks are: WYPF officers, Ministry of Housing, Communities & Local Government (MHCLG) guidance, The Pensions Regulator's Guidance, LGPS Scheme Advisory Board guidance, CIPFA Guidance, External Investment and Actuarial advice and Performance Reviews. Specifically, regarding assessing climate related risks the fund has relied on the expertise of several internationally recognised bodies including:

- The **Transition Pathway Initiative (TPI)** is a tool that allows investors to assess how seriously companies are taking the threat of climate change and how realistic individual companies' carbon reduction commitments are.
- **Institutional Investors Group on Climate Change (IIGCC)** is a leading membership group enabling the European investment community to drive towards a net zero carbon future.
- **Climate Action 100+** is an investor initiative to ensure the world's largest corporate greenhouse gas emitters take necessary action on climate change.
- The **CDP** is a shareholder group that runs a global disclosure system for investors, companies, cities, states, and regions to manage their environmental impacts.

In the most recent review undertaken in April 2024, 50 potential risks had been found, assessed, and quantified by impact (negligible, marginal, critical or catastrophic) and likelihood (almost impossible, very low, low, significant, high, or very high.) Of the risks identified, 32 of these above their acceptable tolerance level, 18 below the tolerance line. Of the 50 potential risks considered five were associated with climate, see Table 2.

#	Short name	Likelihood	Impact
30	Policies not linked to sustainability goals and actions focussed on a small number of issues e.g. fossil fuels.	Low	Critical
31	Measurement and reporting of Engagement is not performed, unfocussed or insufficient.	Low	Critical
32	The fund fails to recognise and manage physical and transition risks of climate change.	Low	Critical
33	Lack of consistent data (e.g. on Green House Gas emissions) for all asset classes hinders understanding of climate risks	Significant	Critical
34	Lack of focus or information means the investment opportunities of Climate change are overlooked or not taken.	Low	Critical

TABLE 2: CLIMATE RELATED RISKS IN THE RISK REGISTER

For those risks judged to be unacceptably high, Management Action Plans (MAPs) are designed to frame the risk management actions that are needed to reduce the likelihood of an event occurring, lessen its impact or both. MAPs also include targets and critical success factors to allow the management action to be monitored.

Climate Risks are classified as Physical or Transition, see Figure 4.

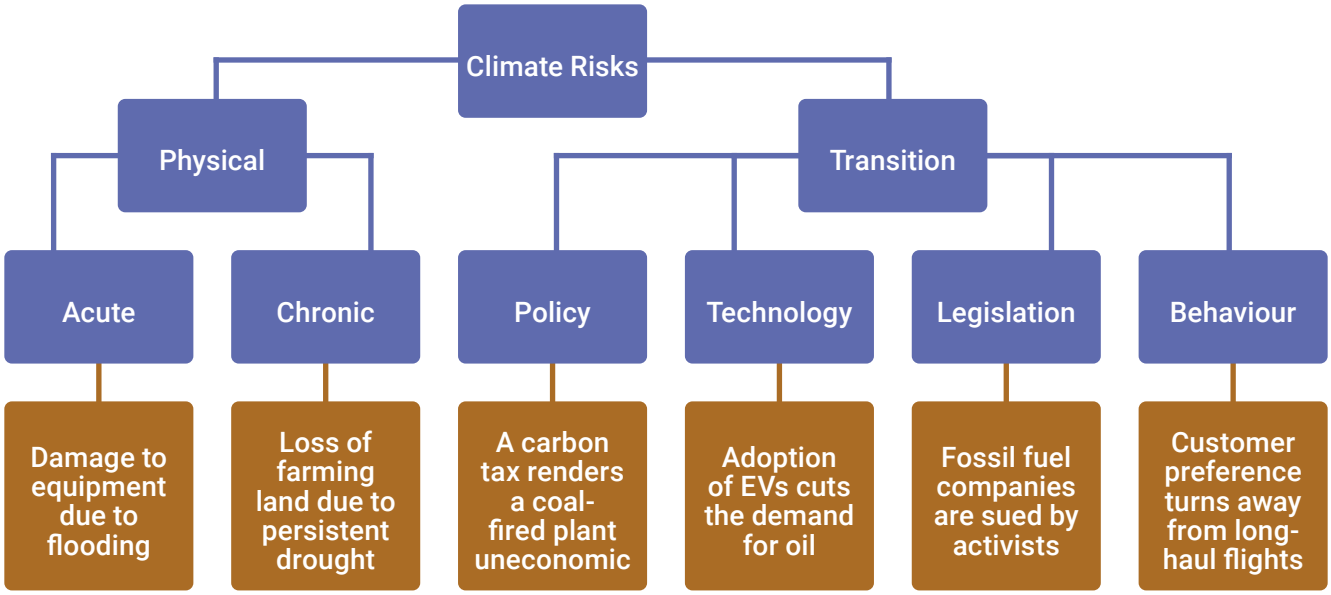


FIGURE 4: TYPES & EXAMPLES OF CLIMATE RISK

4 Goals, Targets and Objectives

4.1 Paris Aligned Asset Owners Commitment

In 2021 WYPF, through Northern LGPS, made a Paris Aligned Asset Owners Commitment (PAAO.) The PAAO is a group of 57 asset owners, with over $3.3 trillion in assets under management, supporting the goal of net zero greenhouse gas emissions by 2050 or sooner, in line with global efforts to limit temperature warming to 1.5ºC above pre-industrial levels using the Net Zero Investment Framework (NZIF). The initiative is governed by a Steering Group of nine asset owners, supported by four regional investor networks including the IIGCC of which WYPF is a member. PAAO requires signatories to abide by a 10-point commitment indicated in Table 3.

1.	Transitioning investments to achieve net zero portfolio GHG emissions by 2050 or sooner.
2.	Implementing this commitment with the aim of achieving real economy emissions reductions.
3.	Setting objectives and targets including an interim target of 2030 or sooner for reducing scope 1, 2 & 3 financed portfolio emissions and setting a target for increasing investment in climate solutions for which offsets are unnecessary.
4.	Where there are not technologically and or financially viable alternatives to eliminate emissions investing in long term carbon removals.
5.	Ensure any direct and collective policy advocacy undertaken supports relevant policy and regulation.
6.	Implementing a stewardship and engagement strategy with clear voting policy that is consistent with an objective for all assets in the portfolio to achieve net zero emissions by 2050 or sooner.
7.	Engaging with credit rating agencies, auditors, stock exchanges, proxy advisors, investment consultants and data and service providers to ensure that funds, products and services available to investors are consistent with achieving net zero emissions by 2050 or sooner.
8.	Setting a target and reducing our operational scope one and two emissions in line with achieving global net zero emissions by 2050 or sooner.
9.	Disclosing objectives and targets and publishing a clear investor climate action plan for achieving these goals as soon as possible no later than one year from making this commitment and reviewing and updating target every five years or sooner.
10.	Reporting annually on the strategic and actions implemented in progress towards achieving objectives and targets and in line with the task force on climate related financial disclosures TCFD recommendations.

TABLE 3: PARIS ALIGNED ASSET OWNERS 10-POINT COMMITMENT

4.2 Net Zero Investment Framework

Investors that make a PAAO commitment are required to disclose their targets and objectives, drawing from the Net Zero Investment Framework (NZIF). The first iteration NZIF 1.0 was introduced in 2019 with a revised version NZIF 2.0 appearing June 2024. At its core are two objectives:

A. The decarbonisation of an investor's fund in a manner consistent with achieving global net zero greenhouse gas (GHG) emissions by 2050 in the real world.

B. Increase investments in "climate solutions" that will facilitate the first objective to be met.

It is envisaged that these objectives be achieved by WYPF by committing to and pursuing four targets, two at the Portfolio level, i.e. in aggregate, and two at the Asset level i.e. individual investment, see Table 4.

	Objectives	Targets
Portfolio Level	A. Decarbonise our portfolios with the goal of achieving global net zero GHG emissions by 2050 (NZ2050).	1. Portfolio Decarbonisation Reference Target – monitoring and reporting progress on emissions reduction.
	B. Increase investment in 'climate solutions' to facilitate NZ2050.	2. Allocation to Climate Solutions. What proportion of assets is invested in those companies facilitating the decarbonisation shift?
Asset Level		3. Asset Alignment target. Assess the progress individual assets are making towards net zero.
		4. Engagement targets defining extent of interaction with the managements of emitting companies in relevant sectors.

TABLE 4: NZIF2.0 OBJECTIVES AND TARGETS

The differentiation between Objectives and Targets is deliberate: The NZIF aims to avoid an approach to target setting that incentivises investors to take actions that reduce their GHG emissions purely to meet a specific target each year (e.g. selling shares of high emitting companies.) The overriding emphasis is the decarbonisation of underlying assets.

4.3 Assets in Consideration

The NZIF encourages asset owners to approach decarbonisation from a top-down basis and to try to include all portfolio assets.

Data availability is still a challenge: we have been unable to obtain appropriate measures of the carbon footprint for our portfolio of alternative investments and we are therefore only considering listed equity, corporate fixed income and sovereign bonds in this assessment. We are collaborating with suppliers to obtain adequate carbon emissions data for the remainder of our portfolio.

In all, 75.7% of our assets are included in our NZ plan – see Table 5.

Portfolio	% of AUM, March 2024	Carbon Footprint?	Included in Net Zero plan
Equity	62.1%	Yes	Yes
Corporate & Sovereign Debt	13.6%	Yes	
Real Estate	2.7%	No	Pending
Private Equity	6.9%	No	
Infrastructure	6.7%	No	
Cash	4.3%	No	
Other	3.7%	No	
Total	100%	n/a	n/a

TABLE 5: WYPF ASSET BY CLASS AND COVERAGE OF CARBON FOOTPRINT

4.4 Greenhouse Gas Types And Sources

Greenhouse Gases (GHG) are a group of compounds "that absorb and emit radiant energy within the thermal infrared range, causing the greenhouse effect." The various GHG vary in terms of their ability to transmit energy, atmospheric presence, and longevity, see Table 6.

Compound	Chemical Symbol	Atmospheric Abundance PPM[1]	Longevity in atmosphere (years)	Warming potential vs CO_2	Included in Kyoto Agreement
Water vapour	H_20	2000-40,000	9 days	Variable	No
Carbon dioxide	CO_2	421	100-1000	1×	Yes
Methane	CH_4	1.9	12	25×	
Nitrous Oxide	N_20	0.334	114	265×	
Sulphur hexafluoride	SF_6	0.00115	3,200	23,500×	

[1] **Parts Per Million**

TABLE 6: TYPES OF GREENHOUSE GAS

Water vapour is the largest source of global warming but was not included in the Kyoto definition of GHG as it is not directly derived from human-caused activities.

Because of its abundance the terms "CO_2 emissions" and "GHG emissions" are used synonymously. Emissions are reported as Tonnes of CO_2 equivalent (TCO_2e) reflecting the different warming potential of different compounds, e.g. methane has 25× the warming potential of CO_2.

For the purposes of our target setting the NZIF 2.0 encourages us to use Scope 1 and 2 emissions, with scope 3 emissions being included when possible.

It is useful to consider various sources of GHG emissions by scope:

- **Scope 1** are those emissions generated directly by the company. These are often associated with the consumption of fossil fuels for heating or transport but could include the release of gases by extractive industries or agriculture. Examples of such emissions include CO_2 generated by an airline's jet engines or captive methane released by mining activity.
- **Scope 2** are emissions tied to energy purchased by the company that is produced by non-renewable sources. Examples could be electricity bought from a utility running coal-fired plants to run machinery or steam for heating.
- **Scope 3**. Whereas the first two scopes are tied directly to the company's activities, scope 3 emissions are much broader and aim to measure all the emissions associated with the entire value chain either up or downstream from the company. Downstream examples include emissions associated with the heating of water needed to use a manufacturer's washing powder, or the petrol burnt by a car a manufacturer has produced. Upstream examples could include emissions associated with the production of steel used by a car company or the methane emissions generated by enteric fermentation in cattle farmed for beef sold by a supermarket.

The inclusion of the entire value chain means that there is significant double counting: consider the c150kg of CO_2 generated by burning a tonne of coal in a power station selling electricity to a supermarket. The 150kg would be tripled as it is considered Scope 1 for the power company, Scope 2 for the supermarket and Scope 3 for the coal miner.

4.5 Pathways and Scenarios.

As discussed in Section 3.4, WYPF recognises that climate change represents financial risk and has the potential to negatively impact the fund, either due to physical risk or because of the transition to the low-carbon economy.

While anthropogenic climate change is accepted as scientific fact, the complex interaction of the earth's interdependent physical systems (Atmosphere, Biosphere, Hydrosphere and Lithosphere) means the specific impact of climate change is difficult to predict at any given time or location. Moreover, the interaction of climate change with societal, economic, and geopolitical systems adds a further layer of complication.

In 2006 the **Stern Review on The Economics of Climate Change** prepared for the UK Government estimated that the potential cost of climate change could amount to between 5-20% of global GDP. The broad range of potential impacts showcases just how uncertain the future impact of climate risks on the financial system is.

Given the uncertainty of the impact of climate change we have considered several scenarios to model its potential impact on the fund using hypothetical, but plausible, future pathways. These scenarios are not predictions or forecasts but future possibilities which enable us to explore the physical and transition risks associated with climate change that may manifest over short, medium, and longer-term horizons. These include those published by the IEA, IPCC, and Aon.

The **International Energy Agency (IEA)**, an authoritative source of energy research, produced a Net Zero by 2050 (NZE) scenario describing a pathway for the energy sector to rapidly decarbonise as an array of clean energy technologies are deployed. The NZE Scenario is based on a detailed analysis of project lead times for clean energy technologies. While it is not unique, and several other pathways have been used to describe the required energy transition, it is considered by the NZIF2.0 to be a rigorous, objective, and achievable goal that will assist investors achieve their Net Zero ambitions. The scenario envisages massive investment and deployment of clean energy technologies including EVs, Heat-Pumps and energy efficiency to rapidly displace fossil fuels including halting sales of internal combustion engine cars by 2035 and unabated coal & power plants by 2040. While challenging the scenario uses only existing technologies.

The **Intergovernmental Panel on Climate Change (IPCC)** the United Nations body for assessing the science related to climate change. The IPCC prepares comprehensive Assessment Reports about the state of scientific, technical, and socio-economic knowledge on climate change, its impacts and future risks, and options for reducing the rate at which climate change is taking place. The IPCC devised five Shared Socioeconomic Pathways (SSP1-5) with various projected global socioeconomic changes up to 2100. Each is a set of qualitative, narrative storylines describing societal futures and a set of quantified measures of development at aggregated and/or spatially resolved scales. Broadly, the five SSPs represent 'sustainability' (SSP1), a 'middle-of-the-road' path (SSP2), 'regional rivalry' (SSP3), 'inequality' (SSP4), and 'fossil fuel-intensive' development (SSP5).

The **NGFS (The Network for Greening the Financial System)** is a group of Central Banks and Supervisors working to improve climate risk management. The group has produced several scenarios that are regularly revised with economic and climate data, policy commitments and technological innovation. In its latest iteration in 2023, the BGFS introduced two new scenarios:

- **Low Demand Scenario** where stringent shadow carbon prices rapidly curtail fossil fuel demand to attain 1.5°C temperature alignment.
- **Fragmented World scenario**, which is a new "too-little-too-late" scenario that entails climate policy delays and divergences reflecting a pessimistic future against the backdrop of the current geopolitical situation.

In 2023 we asked our actuary, Aon, to conduct a scenario analysis examining the possible impact of climate change on the portfolio. The focus of the study was to understand how two important variables: investment returns and mortality, may vary under different scenarios to impact the fund's funding position. Changes in investment returns were tied to dislocation in economies associated with the physical and transitional aspects of climate change. Mortality is likely to vary with a variety of factors including air quality, the impact of health outcomes due to changes in economic growth and the price and availability of food because of climate change. Specifically, Aon envisaged three scenarios as indicated in Table 7.

Scenario	Temperature rise by 2100	Net Zero achieved	Introduction of environmental regulation	Carbon Price 2030/50
Disorderly Transition	<3°C	After 2050	Late & Aggressive	$65/$340
Orderly Transition	1.3°C–2°C	2050	Co-ordinated	$100/$215
No Transition	+4°C	After 2050	None	$40/$50

TABLE 7: AON CLIMATE SCENARIOS

The narratives associated with each scenario are as follows:

- **Disorderly Transition**. The delayed policy response to climate change leads to later but deeper economic shocks with associated detrimental impact on investment returns and health.
- **Orderly Transition.** Under this scenario the global economy experiences short-term weakness owing to the pivot away from fossil fuels with stronger recovery in the medium and long term. In the longer term, better air quality and health benefits associated with a stronger economy lead to an improvement in life expectancies.
- **No transition**. Limited government intervention means transitional impacts are modest but physical costs are more significant in the long-term. Higher mortality softens the impact of weak investment performance.

Aon concluded that the "Disorderly Transition" scenario, would prove most damaging to the fund, Table 8, and Figure 5. Although initially the funding level improves in line with the base case, after 10 years the funding level deteriorates sharply and does not recover by the end of the 20-year modelling period. This leaves the fund materially worse off in terms of surplus relative to the "Base Case". Under the "No Transition" scenario the long-term outcome for the fund lags the "Orderly Transition" scenario given lower growth and investment returns. Under the "Orderly Transition" scenario, the fund experiences large falls in the funding level of around 25% before recovering.

	LT Investment Return	Improvement in LT Mortality Rate pa	Funding Level	Difference vs base
Base scenario	6.4%	+1.5%	198%	-
Orderly Transition	6.9%	+2.0%	185%	-13%
Disorderly Transition	1.7%	+1.0%	69%	-129%
No Transition	**5.6%**	**0.0%**	**170%**	**-28%**

TABLE 8: AON ESTIMATED IMPACT OF CLIMATE SCENARIOS ON FUNDING LEVEL

It is important to realise that the scenario analysis is a modelling exercise based on the choice of two variables that grossly simplifies, and potentially underestimates, the potential impact of climate change. There are also further caveats:

- The scenarios are looking at a period of just 20 years. The "no transition" scenario has a better performance that the "disorderly" because of this timeframe. One of the most insidious aspects of climate change is its long-term impacts.
- The focus on funding level is reductive and improvements in funding level should not be uniquely considered a "better outcome" as it captures only the difference between assets and liabilities. The idea of better investment returns increasing assets is undoubtedly a positive, however, the same cannot be said to true of lower liabilities resulting from higher mortality.
- We anticipate scenario analysis will continue to evolve. In reviewing early climate modelling, the Network for

Greening the Financial system, a group of 114 central banks and financial supervisors, concluded models routinely did not include "impacts related to extreme weather, sea-level rise or wider societal impacts from migration or conflict". It is likely the "No Transition" scenarios will start to look even less positive in future iterations.

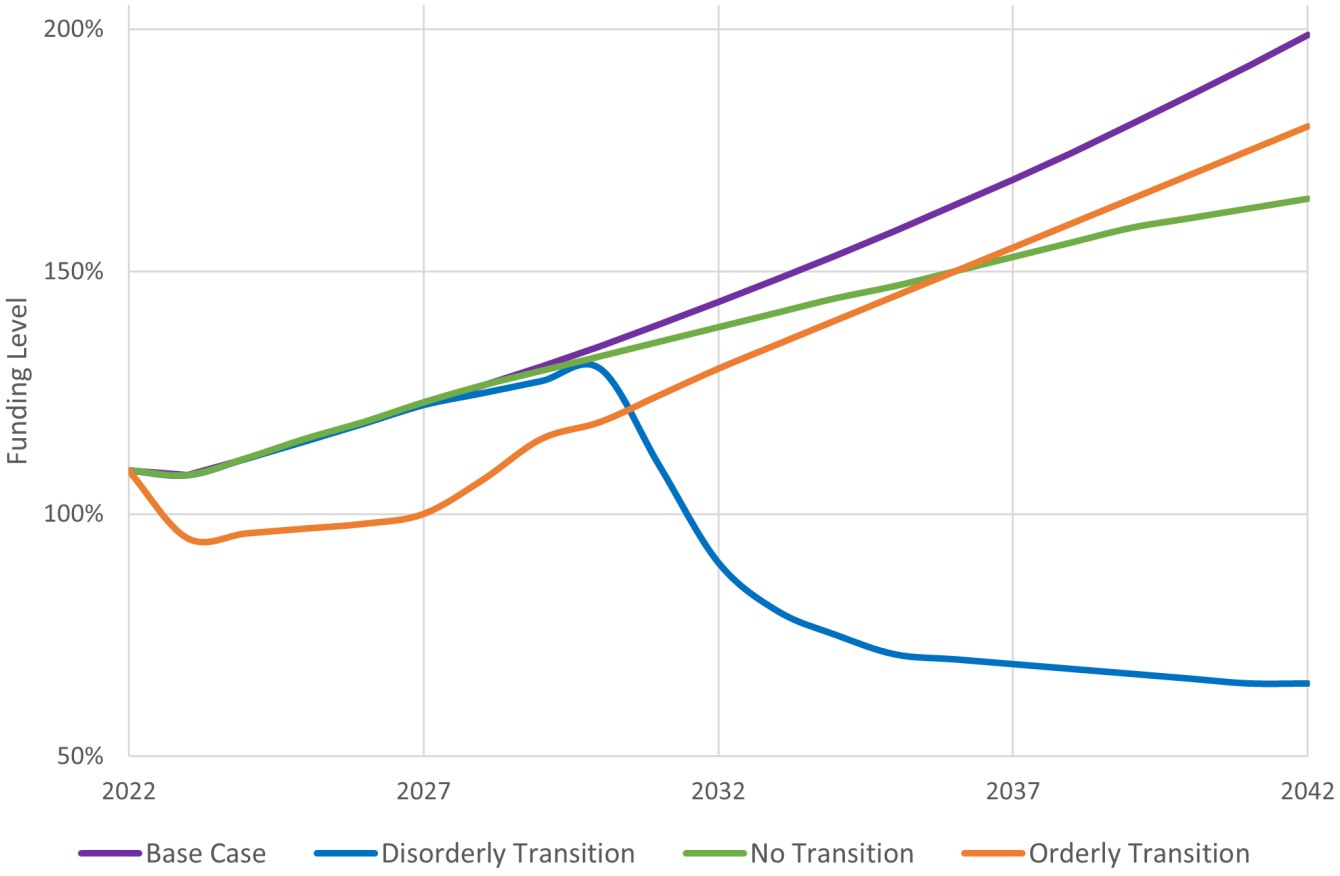


FIGURE 5: AON FUNDING ESTIMATES UNDER DIFFERENT CLIMATE SCENARIOS

4.6 Offsets

While we have a "Net", rather than "Gross", net zero pledge, meaning that we have the flexibility to use offsets to achieve our net zero target, our primary focus is the curtailment of real-world emissions. We are sceptical regarding the quality of many commercially available schemes and believe the lack of suitable offsets means that they should be used for only the hardest to abate carbon-intensive sectors. This situation may change as technology develops and we will continue to monitor developments. For example, several companies in which we invest are developing Carbon Capture and Storage capabilities. Our approach is consistent with the Science Based Targets Initiative standard that requires a 90% reduction in emissions with no more than 10% being offset by 2050.

5 Carbon Emissions

5.1 Carbon Footprint

We use an external consultant, S&P Trucost, to calculate the fund's carbon emissions and those of the underlying benchmarks. Given the lack of available data for our private markets investment portfolio, as described in Section 4.3, we have chosen to present the carbon data for separate portfolios individually (six geographic equities, one corporate and one sovereign debt) rather than in aggregate. We believe that this approach will be more useful as we compare data over time.

The fund's carbon footprint is measured by owned emissions, which are the pro-rata emissions of those companies in which we invest. For example, if we owned ½ of 1% of the enterprise value (i.e. the combined value of both its equity and debt) of a company emitting 10mnt of CO_2e, our owned emissions from this investment would be 0.005 × 10,000,000 = 50,000 TCO_2e. The fund's carbon footprint is the aggregate total of these owned emissions. For our investments in sovereign bonds, the calculation is different and represents our fractional ownership of a country's gross general debt multiplied by the emissions of that country. Sovereign emissions are considered in aggregate and not divided into scopes.

The CO_2 emissions for each of the eight portfolios considered, along with the benchmarks for each, are shown in Figure 6. Of the eight funds, seven reported lower than their respective indices. The differences ranged from –2% to –61% but averaged an impressive –16%. The exception was the European equity fund that had emissions 0.1% higher than its benchmark.

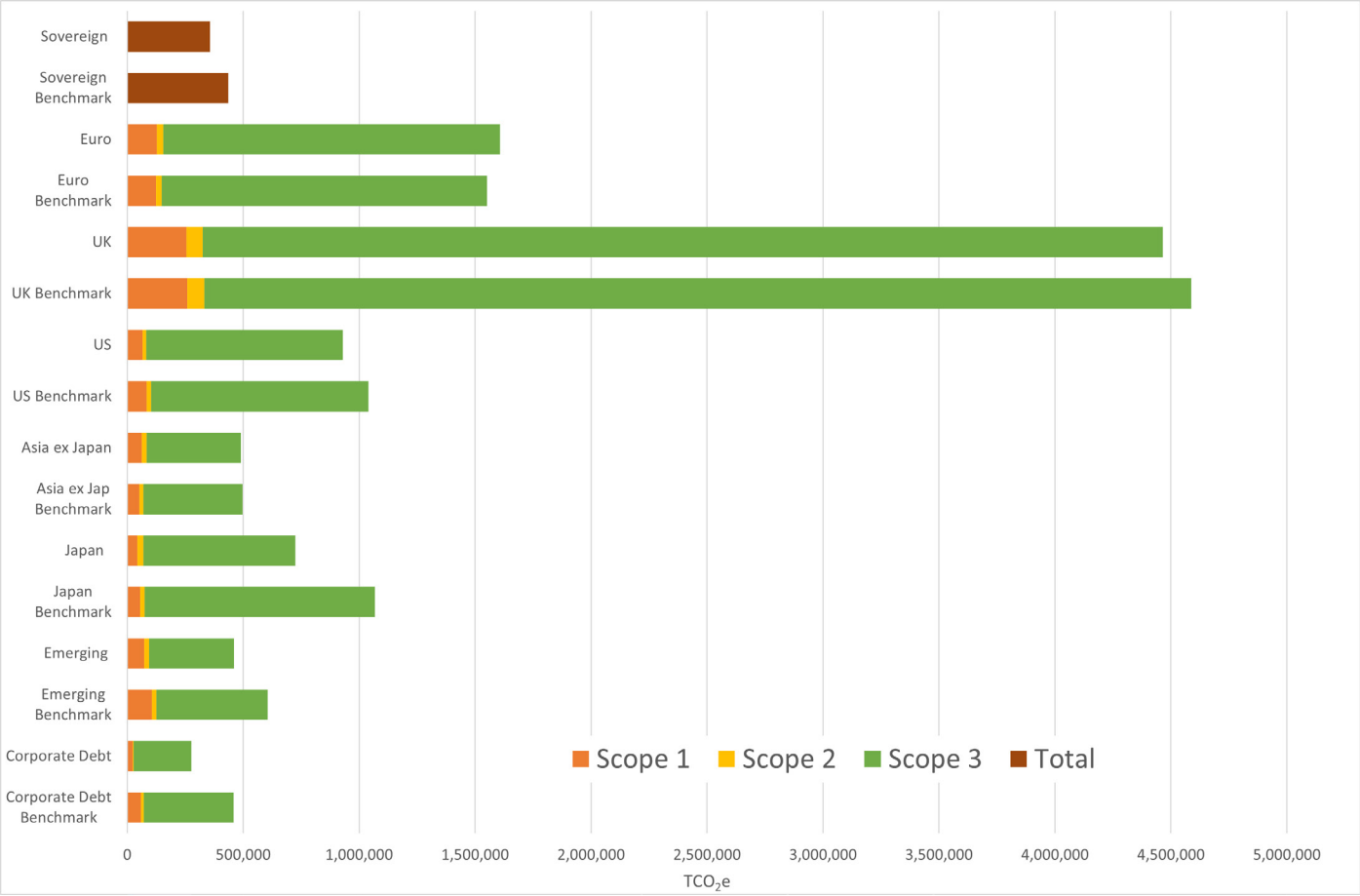
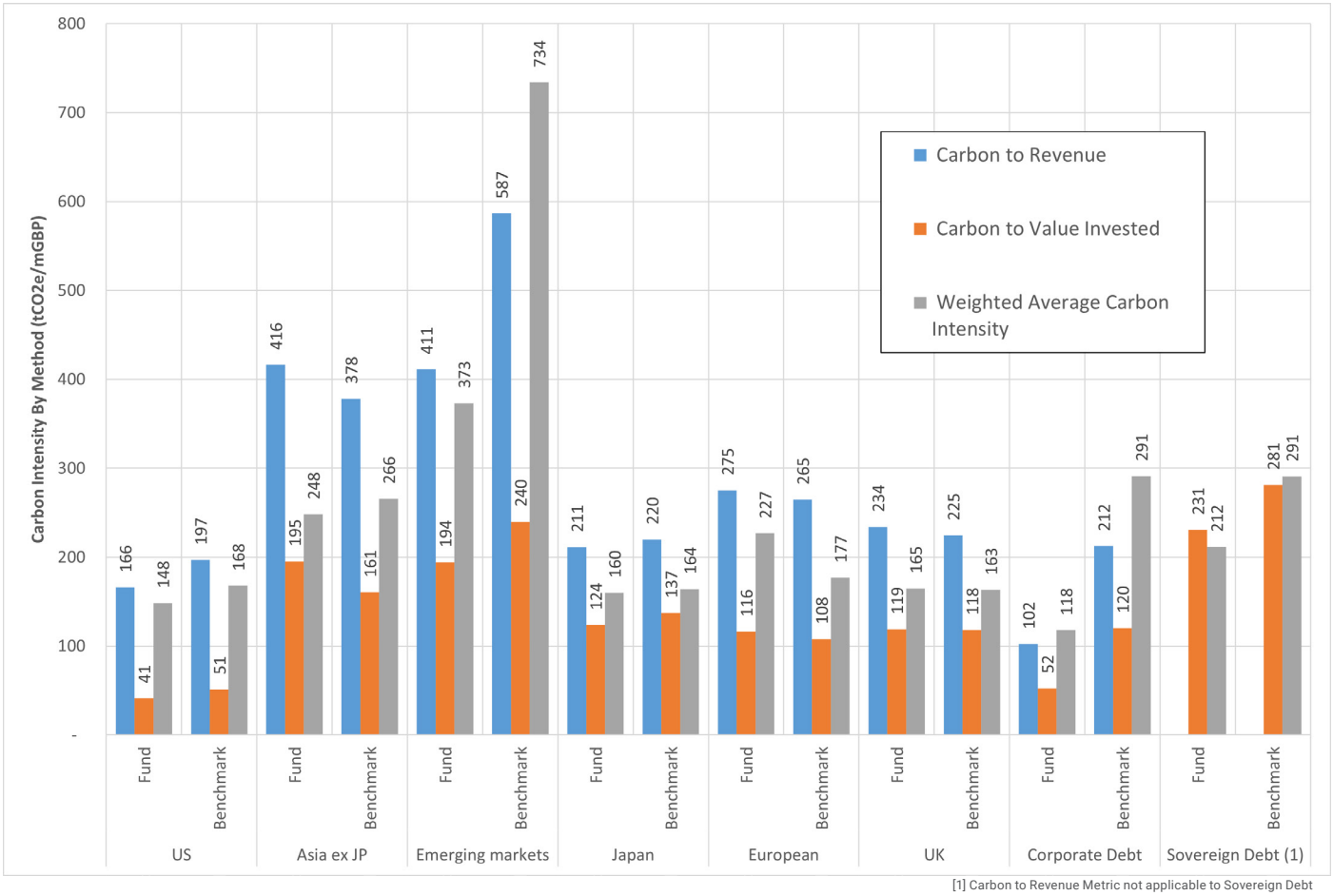


FIGURE 6: CO_2 PORTFOLIO EMISSIONS TYPE

While we recognise that net zero is an absolute target, we also track three normalised measures of the carbon intensities of our portfolios which will allow us to better track our progress made toward net zero. The three measures are:

- **Carbon/Revenue (C/R)** expresses the volume of carbon emitted per dollar of sales generated by portfolio companies. It is a valuable measure of the "carbon efficiency" of the portfolio and is calculated by dividing the appropriated CO_2e by the apportioned revenues. This metric is not applicable to Sovereign Debt portfolios.
- **Carbon/Value Invested (C/V)** indicates the amount of carbon emissions per million dollars of portfolio value permitting distinct size portfolios to be compared. The metric is calculated by dividing the appropriated CO_2e by the value invested.
- **Weighted Average Carbon Intensity (WACI)** captures a portfolio's exposure to carbon intensive companies. It is calculated by summing the product of each holding's weight in the portfolio with company level C/R intensity. Figure 7 displays the different Carbon intensity by method for each of the portfolio and benchmark.



[1] Carbon to Revenue Metric not applicable to Sovereign Debt

FIGURE 7: CARBON INTENSITY BY METHODOLOGY

As with the absolute levels of carbon, the fund's carbon intensity scored well: of the twenty-three measures, eighteen were lower than the relevant benchmark.

Geography	Communication	Consumer Discretionary	Consumer Staples	Energy	Financials	Health	Industrials	IT	Materials	Real Estate	Utilities
Euro	40	70	204	405	9	49	140	52	1,134	181	769
Euro Benchmark	41	65	235	451	8	52	110	46	1,255	117	761
UK	39	82	166	319	7	38	123	43	637	28	428
UK Benchmark	37	82	158	322	8	40	117	27	500	43	434
US	44	51	73	479	8	22	274	51	909	215	2,148
US Benchmark	43	71	161	546	62	23	173	59	761	131	2,243
Asia Ex Japan	78	86	711	656	6	50	405	158	783	106	4,353
Asia Ex Japan Benchmark	55	83	314	588	14	64	314	165	974	112	2,846
Japan	60	115	124		6	39	221	92	1,246	69	344
Japan Benchmark	45	93	208	522	9	51	188	104	1,059	65	874
Emerging	175	87	549	521	20	88	484	204	975	179	2,109
Emerging Benchmark	91	114	365	762	44	135	429	130	2,201	105	4,222
Corporate Bond	42	40	168	732	14	18	85	29	67	101	383
Corporate Bond Benchmark	44	72	271	472	21	33	180	59	902	104	1,333

TABLE 9: CARBON INTENSITY (C/R) OF PORTFOLIOS BY SECTOR

The difference between the emissions of our portfolios compared to their benchmarks is explained by the combination of our relative sector and stock weightings. Table 9 indicates the wide dispersal of C/R carbon intensity over the variety of sectors and geographies considered (blue indicates lower intensity sectors e.g. Japanese Financials, red higher e.g. Emerging market Utilities).

Table 10 demonstrates how the chosen combination of sector and stock weighting within sectors explains the difference in carbon intensity between our portfolio and the benchmark. In the case of Emerging Markets, for example, the 29.9pp lower carbon intensity of the portfolio (411 vs. 587 tCO_2e/£mn revenue) reflects the combination of an overweight position in relatively high intensity sectors (which added 9.6pp to the intensity) being offset by underweight positions in high intensity companies within those sectors (that reduced intensity by 39.5 pp).

Portfolio	C/R Intensity (tCO_2e/£mn revenue)		Variation Attributable to		Total
	Portfolio	Benchmark	Sector	Investee	
Euro	275	265	-8.3%	4.3%	-4.0%
UK	234	225	3.8%	-8.1%	-4.3%
US	166	197	6.0%	9.7%	15.7%
Asia X Japan	416	378	6.8%	-17.0%	-10.1%
Japan	211	220	4.6%	-0.7%	3.9%
EM	411	587	-9.6%	39.5%	29.9%
Corporate debt	102	212	-4.6%	56.4%	51.8%

TABLE 10: ATTRIBUTION OF CARBON INTENSITY VS BENCHMARK USING CARBON/REVENUE METRIC

Figure 8 attempts to draw in the various themes discussed above displaying the WACI carbon intensity on the vertical axis, total scope 1 & 2 emissions on the horizontal and balloon indicating the size of respective funds in £mn pounds. The UK fund has the largest absolute emissions at 325k TCO_2e and value of £4.9bn but has WACI of 165, below the average of its peers. Conversely, Emerging Markets has lower absolute emissions of 95k TCO_2e and value of £991mn, but higher intensity with a WACI of 373, more than double that of the UK fund.

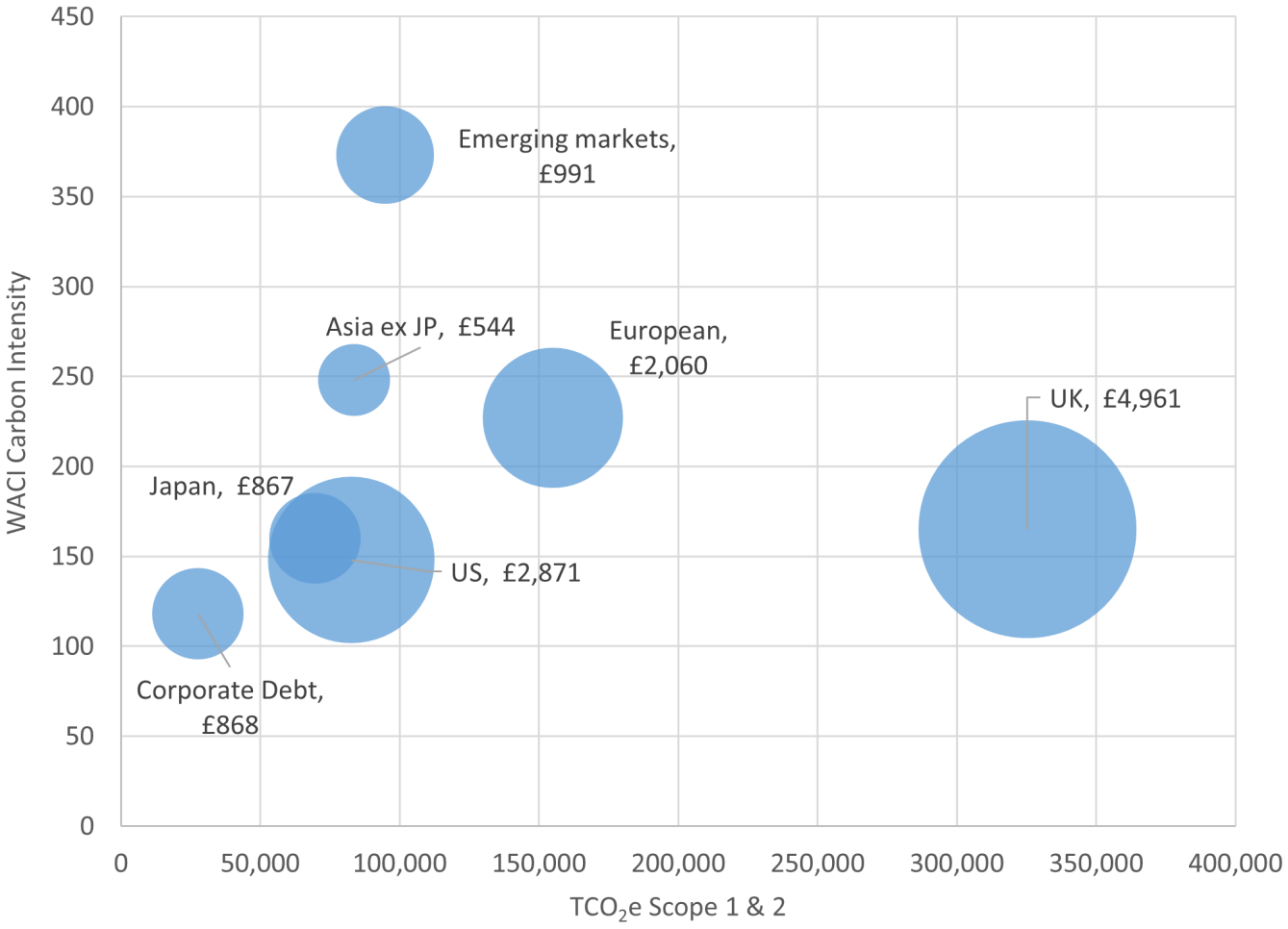


FIGURE 8: EMISSIONS, CARBON INTENSITY AND AUM OF PORTFOLIOS

5.1.1 Ten Largest Emitters

As indicated in Table 9, emissions are unevenly distributed across sectors, and our carbon emissions are highly concentrated in a narrow number of stocks. Table 11 indicates the ten largest Scope 1 & 2 emitters. While the list represents only 6.5% of the value of the equity and corporate debt portfolios, in total they represent 34.5% of Scope 1 & 2 emissions.

Company	Investment (£mn)	BPS vs BM	GICS Sector	GICS Subindustry Group	Apportioned Scope 1&2
Shell plc	379.3	+76	Energy	Oil and Gas	94,765
BP p.l.c.	169.2	+6	Energy	Oil and Gas	43,620
Rio Tinto Group	110.4	+1	Materials	Metals & Mining	34,692
AGL Energy	3.6	+54	Utilities	Multi-Utilities	28,893
Glencore plc	67.9	-82	Materials	Metals & Mining	25,353
Anglo American	49.8	+5	Materials	Metals & Mining	19,600
RWE	6.5	+4	Utilities	Electricity Generation	15,894
Nippon Steel	4.9	+17	Materials	Steel	14,304
Linde plc	66.8	+285	Materials	Industrial Gases	12,961
IAG	13.7	+1	Industrials	Airlines	12,906

TABLE 11: TEN LARGEST SCOPE 1&2 EMITTERS BY INVESTMENT

5.2 Carbon Performance

5.2.1 Equity and Corporate bonds

WYPF have six years of carbon footprinting data for its listed equity and fixed income portfolios allowing us to track the progress we are making toward our net zero goal. Our Scope 1&2 emissions, see Figure 9, indicate erratic progress. The principal reason for the volatility seems to be the impact of COVID lockdowns on economic activity combined with lags in data collection. For example, of the 1,210 companies that reported emissions in the 2023 report, only 1% used 2023 data, 15% from 2022, 85% from 2021, while 1% came from 2020. Therefore, it would appear that the 2023 report captures the bounce back in economic activity post lock-down, rather than deterioration in carbon efficiency between 2022 and 2023. Directly comparing 2024 vs 2019, avoiding the distortion of the COVID crisis, suggests Scope 1&2 emissions have fallen 13.6%, or 3.5% annually on a compounded basis.

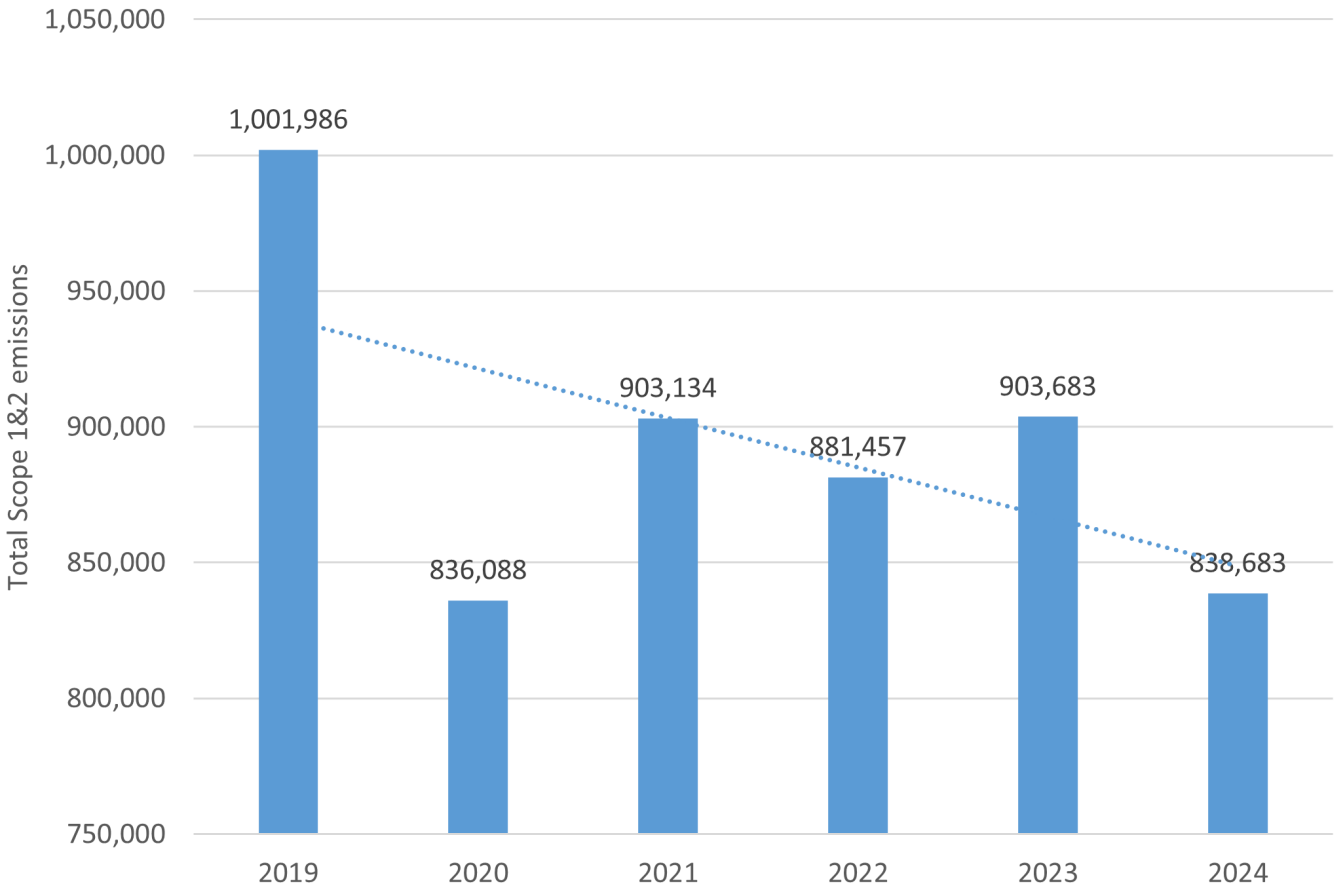


FIGURE 9: TOTAL SCOPE 1 & 2 EMISSIONS ON EQUITY + CORPORATE DEBT PORTFOLIO

Similarly, there have been improvements in the carbon intensity of the fund although, once again, the impact of COVID adds considerable noise to the data, Figure 10. Simplifying the approach to compare the data for 2024 directly with that of 2019, suggests some progress has been made: five of the portfolios have intensity reduction CAGRs higher than 5%, three more than 10%.

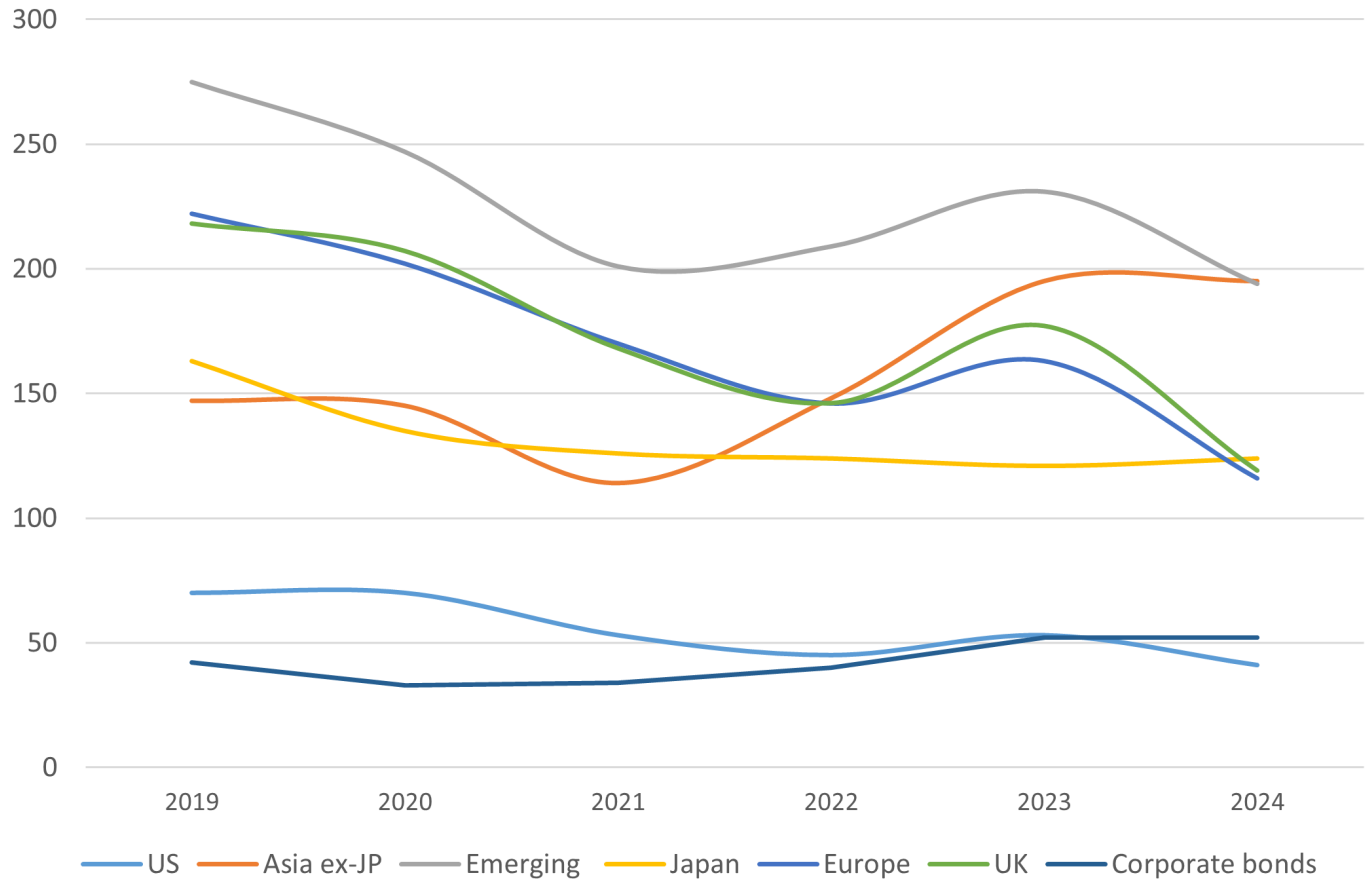


FIGURE 10: APPORTIONED CARBON TO VALUE (tCO_2E/£MN) BY PORTFOLIO

5.2.2 Sovereign Debt

Sovereign bonds are distinct since the emissions of national issuers are not comparable to emissions from these other asset classes. The NZIF recommends that such assets not be included in NZ commitments at the portfolio level but still considered at an asset level.

In the instance of sovereign bonds, the progression of a given state's future expected emissions performance per capita needs to be considered in determining a net zero pathway. The role played by engagement in influencing sovereign issuers' behaviours is considered less important; it is recognised that institutional investors have less influence over nations than they do over companies in which they are invested.

As of March 2024, WYPF held sovereign bonds worth £1,546mn. Our UK weighting of 80.2% was significantly higher than the Benchmark weight of 4.6% making comparisons problematic. Nevertheless, the total apportioned net emissions for the portfolio were 357,057 tCO_2e, 18% below the benchmark's 434,952 tCO_2e.

As in the case of equities and corporate bonds intensity measures are also considered:

- The Carbon / Output (C/O) metric describes the relationship between the average amount of greenhouse gas emissions (tCO_2e) generated per £mn of GDP (Current). A lower level relative to the benchmark indicates a lower dependency on the production and consumption of carbon intensive goods and services.
- The Carbon / Value (C/V) metric describes the relationship between the average amount of greenhouse gas emission (tCO_2e) per £mn GDP (Current) invested in the portfolio. A lower level of emissions relative to the benchmark indicates a lower greenhouse gas impact per unit of investment on average.
- The Weighted Average Carbon Intensity (WACI) describes the portfolio's exposure to specific countries' carbon intensities on a portfolio weight (%) basis. Portfolio weight is determined by value invested, so the portfolio's overall carbon intensity will be determined by country-level carbon intensities and investment amount in each issuer.

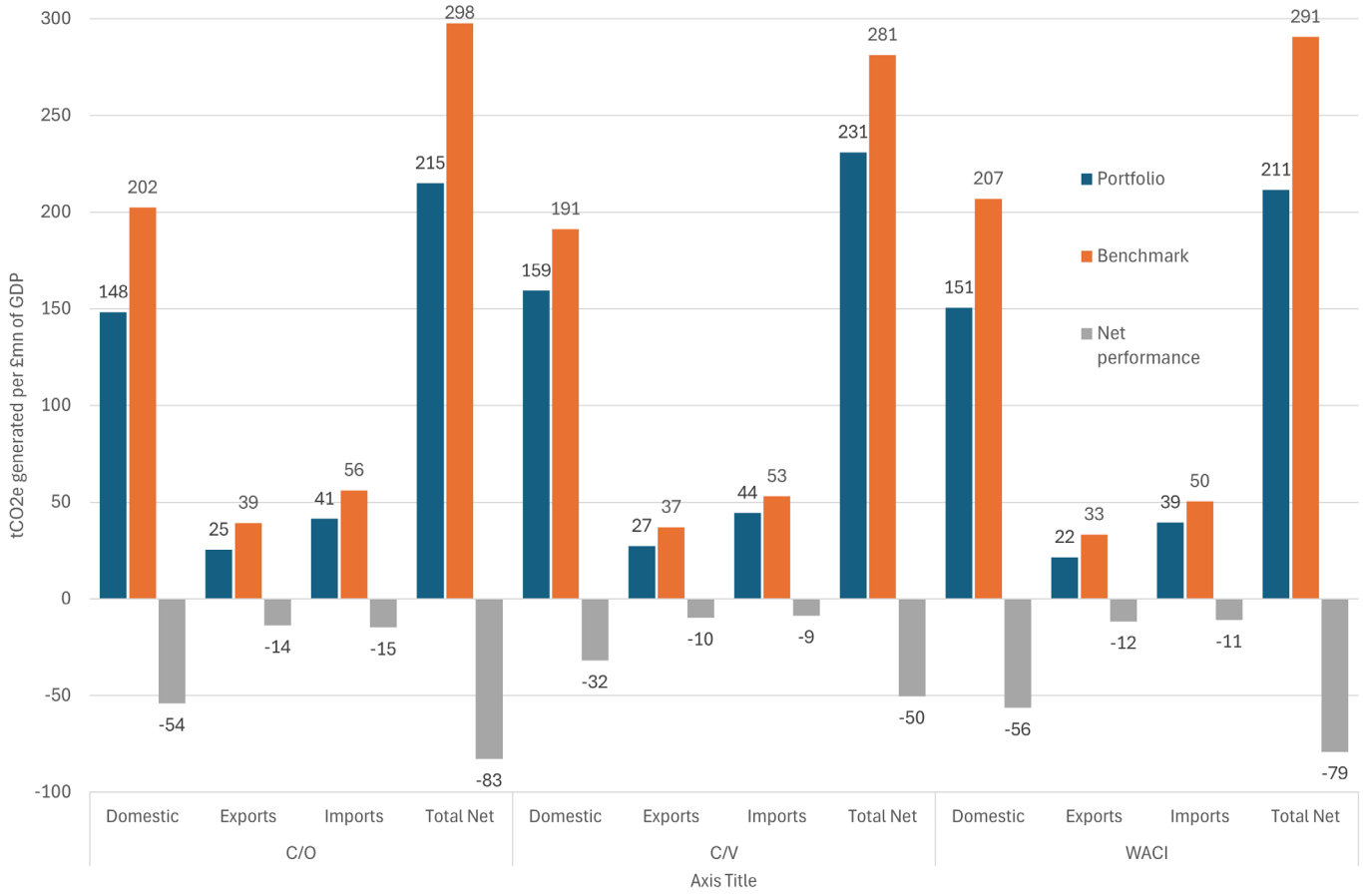


FIGURE 11. SOVEREIGN PORTFOLIO CARBON INTENSITY

On each of the normalised measures considered, the sovereign debt portfolio's emission intensity was below those of the benchmark. Table 12 provides the attribution of the sovereign portfolio's intensity to that of the benchmark on a WACI basis. The intensity of the portfolio (tCO_2e/£mn revenue) of 211 was 27.2% below that of the Benchmark of 291 largely because of its overweight in European & UK (and UK specifically.)

Region	Weight Portfolio	Weight BM	Intensity Port	Intensity – BM	Region effect	Country effect	Total effect
Asia-Pacific	0.9%	15.6%	429	404	5.8%	-0.1%	5.7%
Europe & UK	87.6%	36.5%	198	255	6.3%	17.1%	23.4%
Latin America	0.0%	0.0%	–	–	0.0%	0.0%	0.0%
Middle East	0.0%	0.3%	-	276	0.0%	0.0%	0.0%
US & Canada	11.5%	47.6%	297	281	-1.2%	-0.6%	-1.9%
Total	**100.0%**	**100.0%**	**211**	**291**	**10.8%**	**16.4%**	**27.2%**

TABLE 12: ATTRIBUTION OF SOVEREIGN PORTFOLIO INTENSITY vs BENCHMARK

5.3 Implied Temperature rise goal

As part of our annual carbon footprint exercise, Trucost provides us with an assessment of the Paris Alignment of each portfolio against the goal of limiting global warming to 1.5°C or 2°C above pre-industrial levels. The assessment examines both historical performance as well as forward-looking indicators to assess the adequacy of emissions reductions made over time. Table 13 indicates a level of warming that each portfolio is aligned with.

Portfolio	Temperature Alignment
Asia X Japan, Corporate Debt, UK	<1.5°C
Euro	1.5 to 2°C
Emerging Markets	2 to 3°C
US, Japan	>3°C

TABLE 13: TRUCOST ESTIMATED TEMPERATURE ALIGNMENT

Figure 12 indicates portfolios' performance against their theoretical 2°C and 1.5°C carbon budgets. Positive numbers indicate weaker performance as it means the portfolio is "over budget" vs its NZ pathway, whereas a negative number indicates a stronger performance as it means the portfolio is under budget vs pathway. Looking at the first three portfolios indicates divergent performance: Europe is underbudget vs a 2°C pathway but overbudget on 1.5°C pathway, the UK is under on both, while the US is significantly overbudget on both measures.

FIGURE 12: CARBON BUDGET VS PARIS ALIGNMENT

5.4 Operational Carbon

A core component of our PAAO commitment (Section 4.1) is to reduce our operational scope 1 & 2 emissions consistent with achieving global net zero emissions by 2050 or sooner.

We understand that compared to our financed emissions (described in Section 5.1), our operational carbon footprint is modest. Our principal sources of carbon are associated with:

- **Accommodation**. We occupy 13,500 ft² of an office space with an EPC rating of C. Power for heating, cooling, lighting, and power is sourced via a standard contract with our energy company. Energy usage has been curtailed post the pandemic with staff working from home 2–3 days a week. We are investigating the possibility of switching to a Green Tariff based on renewable energy.
- **Business Travel**. A small minority of staff routinely travel as part of their duties. We are considering how best to reduce such emissions including the use of carbon offsetting schemes.

5.5 Stranded Assets

As described in Section 3.4, climate change has the potential to negatively impact the fund either because of physical or transitional risk. The term “stranded asset” is used to describe those assets that are vulnerable to transitory risk associated with political, technological, legislative, or behavioural changes associated with climate change. Such assets may need to be written down in value or usage curtailed before the end of their anticipated economic lifecycles.

Many of these assets sit within the fossil fuel sector such as equipment including oil platforms, refineries, storage facilities, pipelines, and other distribution infrastructure as well as physical oil & gas reserves. Indeed, under the NZE pathway (Section 4.5) the IEA estimates that demand for oil could be met with existing proven reserves as oil demand falls from 100mn+ bpd to 25mn bpd by 2050. Ongoing investment in new fields potentially increases the risk of future stranding of reserves.

Trucost provides the revenue exposure of individual portfolios to fossil fuels as a proxy for potential stranded asset risk, Figure 13. The total bar size represents the combined weight in the portfolio or benchmark of company revenues derived from extraction (drilling & mining), energy (power generation) or fossil-fuel activity more broadly (reserves & CAPEX).

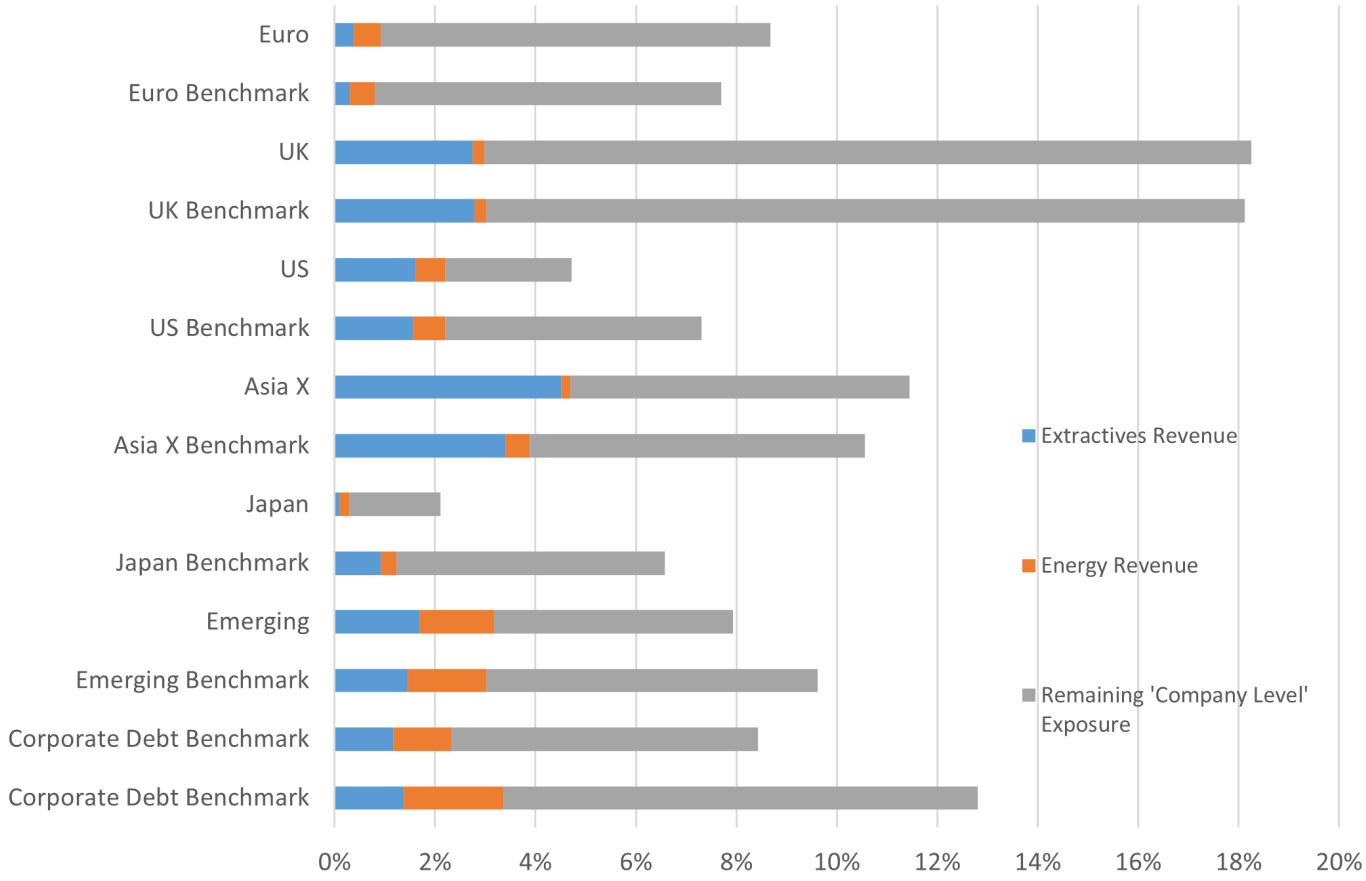


FIGURE 13: TRUCOST ESTIMATED STRANDED ASSETS BY PORTFOLIO

6 Portfolio and Asset Alignment Targets

As described in Section 4.1, the NZIF establishes four distinct reference targets, two each at the portfolio level, Table 14, and two at the asset level, Table 15.

Target	WYPF OBJECTIVE	
	Interim	2050
1. Portfolio Decarbonisation Reference Target	50% cut in the intensity of Scope 1 & 2 emissions by 2030 vs. 2019 baseline.	100% cut in Scope 1 & 2 emissions by 2050
	Progress: Since 2019 the WACI of the fund has fallen from 305 tCO_2e/£mn Rev to 187, an absolute decline of 39% (Section 6.1)	
2. Allocation to climate Solutions.	Investment in climate solutions to increase to 5% by 2030 & 7.5% by 2040[1]	Investment in climate solutions to increase to 10% by 2050.
	Progress: As of March 2024, 2.9% of the WYPF was invested in carbon solutions (Section 6.2)	

[1] Our PAAO submission referred to an aggregate dollar investment of $431mn representing 1.9% of fund assets a ratio that we expected to maintain by 2030. The 5% / 7.5% / 10% targets indicate greater ambition

TABLE 14: PORTFOLIO LEVEL TARGETS

We pledge to review our objectives on a triennial basis considering progress made toward goals, the improvement in data quality and best practise.

At this point it is important to recognise that different asset classes will have different Net Zero pathways. These variations reflect the amount of control specific financial investments have on decision making; for example, we have more leverage on decision making at listed companies where we have voting rights than we might do over corporate debt.

Target	WYPF Objective	
	Interim	2050
3. Asset Alignment target. Assess the progress assets are making towards net zero at the portfolio level	A 2030 target of 60% of AUM to score: "net zero", "aligned" or "aligning"	By 2050 100% of material assets to be either "net-zero" or "aligned" to net zero [1]
	Progress: As of March 2024, alignments are Net Zero 0%, Aligned 0%, Aligning 5%, Committed 69% and Not Aligned 27% (Section 6.3)	
4. Targets defining extent of engagement with emitters in relevant sectors	A minimum of 70% of financed emissions in material sectors[1]	100% of financed emissions in material sectors in 2050[1]
	Progress: Via direct and collaborative actions, we engage with c84% of our scope 1 & 2 emissions. (Section 6.4)	

[1] Our PAAO submission did not make define an explicit numerical target on this variable

TABLE 15: WYPF ASSET LEVEL TARGETS

Moreover, it is considered that within specific asset classes, regional and sectoral pathways will diverge from global pathways as different industries and geographies decarbonise at different rate. For example, it is

envisaged that the electrical utilities sector will be able to decarbonise at a faster rate than the cement industry given the current availability of technological alternatives. Conversely, it should be recognised that certain countries are more advanced in their transition pathways; between 1990 & 2019 the UK made considerable progress cutting emissions 40% by replacing coal fired electricity generation with gas fired stations and renewables. However, using a Dec 2019 baseline fails to capture such gains. Given this complexity we have initially chosen to assume that the transition paths will be the same for the different asset classes within the portfolio. We will review this approach periodically.

6.1 Target 1: Portfolio Decarbonisation Reference Target

The overarching aim of our Net Zero commitment is to cut owned emissions to zero by 2050. The primary metric used to assess this aim will be our annual measurement of carbon emissions and intensity.

As discussed in section 5.2, between 2019 and 2024 the scope 1&2 emissions of the fund have declined 13.6%, or 3.5% annually on a compounded basis. While this is an encouraging start, it is only half of the 7% rate required to decarbonise the fund by 2050. The modest decline is, in part, explained by the 32% growth in the value of the equity and corporate bond funds, from £9.8bn to £13.2bn, over the period. This growth has masked the significant improvement in the carbon intensity of the fund; the WACI declined 38.8% in the last six years, an annual decline of 7.9%, Figure 14.

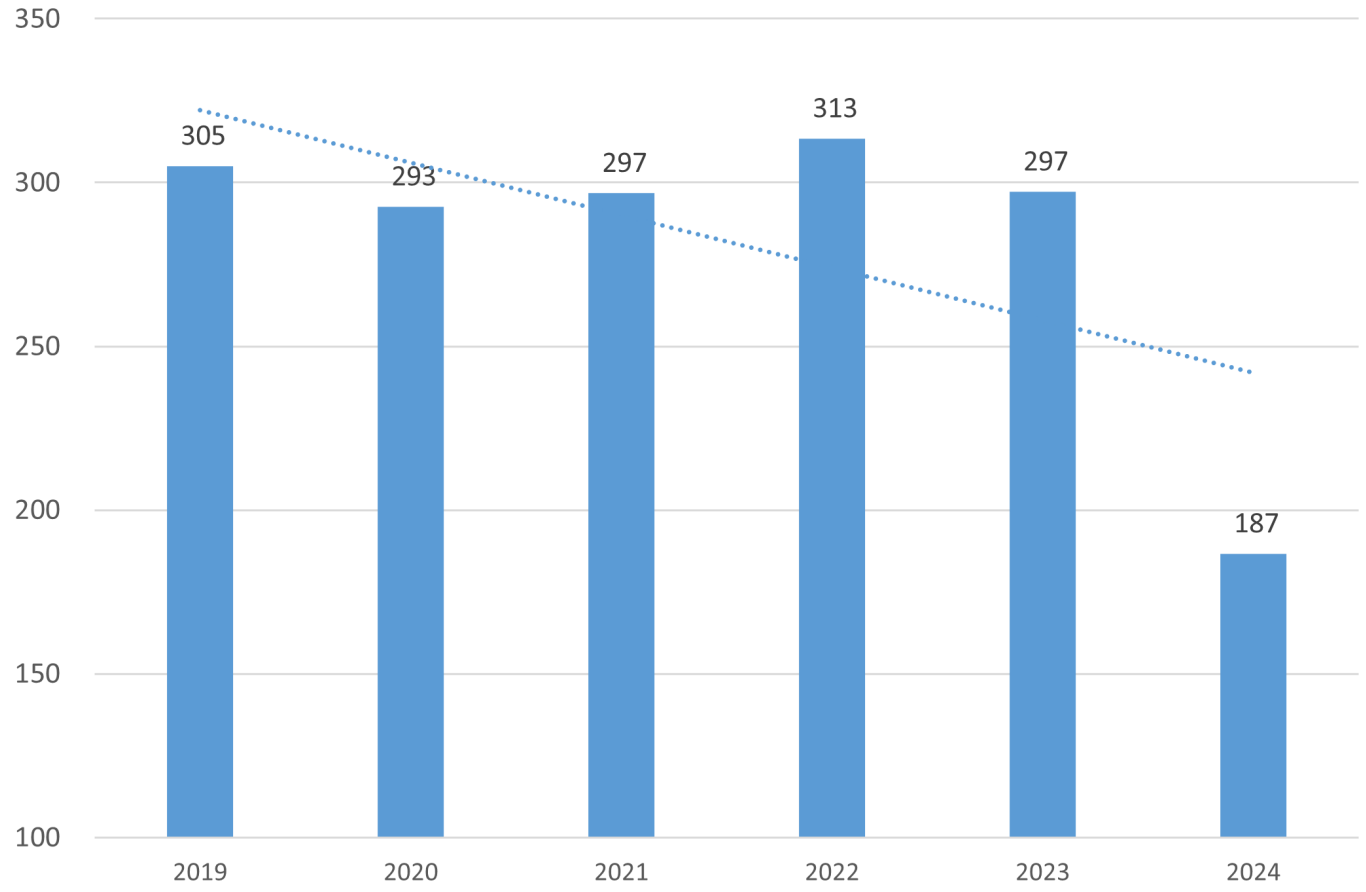


FIGURE 14: BLENDED WACI

6.2 Target 2: Investing in climate solutions.

While we have the expectation that all companies in which we invest should adopt NZ ambitions, different business models, approaches to innovation and varying regulatory regimes mean all companies move at different speeds. It is useful to characterise distinct groups of companies within the transition. Materiality, is clearly an important consideration, as is the identification of “enablers”, those companies developing climate solutions that will facilitate decarbonisation more broadly in contrast to “mitigators” focussed on the decarbonisation of their existing operations.

We invest in climate solutions in three ways:

1. Direct exposure to renewable energy companies through our PE and infrastructure funds.
2. Investment in Listed alternatives (Primarily Investment Trusts) focused on the energy transition.
3. Public equities using the Bloomberg Industry Classification System (BICS) involved in Renewable Energy Generation, Equipment Manufacturing or Electricity Transmission & Distribution.

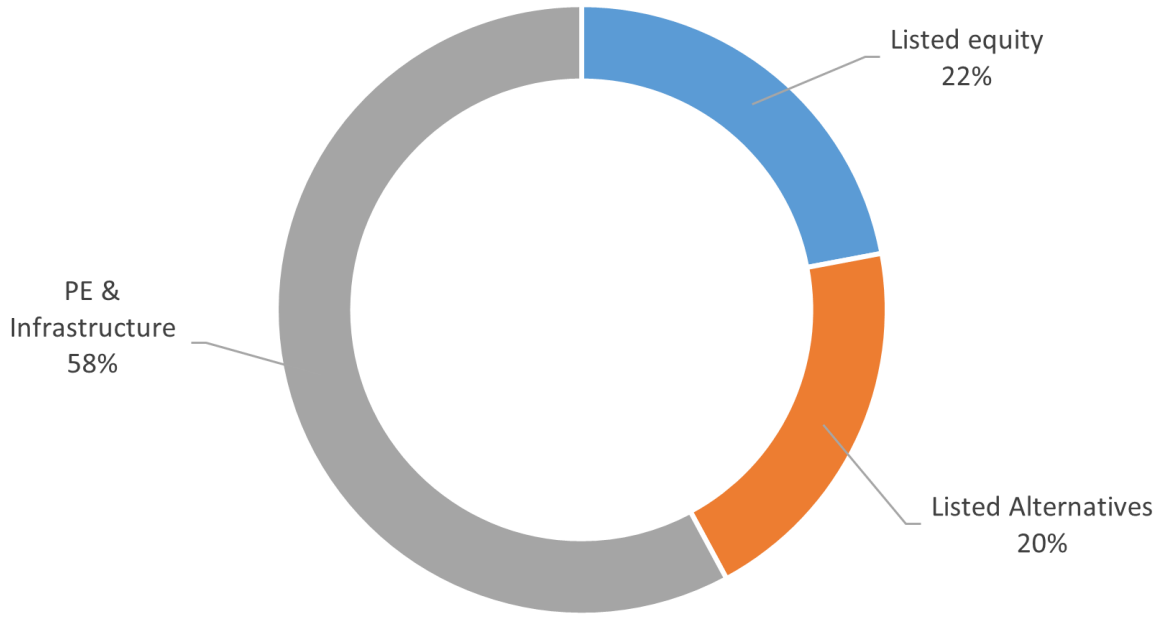


FIGURE 15: CLIMATE SOLUTIONS BY SOURCE

Our climate solutions investments, Figure 15, totals £572mn of investments representing just 2.9% of the in-scope assets. The modest total does not reflect any lack of ambition on the part of WYPF but reflects the stringent criterion imposed:

- The definition includes only "enablers", those companies whose products and services permit others to decarbonise. It ignores the "virtuous", those companies that are well advanced in their pathways but have a different business focus or those in low-carbon industries.
- A sizeable proportion of "green solutions" are utilities which represent only 2.7% of the MSCI All Country World Index.
- Clean energy is not the only route to redemption. Carbon emissions stem from a broad variety of sources, and we believe that sectors including agriculture, forestry, construction, manufacturing, and transportation, will play a vital role in decarbonisation.

We hope that in future we can refine our measures of climate solution investments to better capture the nuances described above.

In September 2024 WYPF announced that it had acquired 25% of **Rebalance Earth**, a start-up alternative fund manager that specialises in water-related "nature as a service" contracts which we anticipate will facilitate further investments in climate solutions.

6.3 Reference Target 3 – Asset Alignment target

6.3.1 Equities & corporate bonds

WYPF uses the NZIF framework and data from the CA100+ and the TPI to assess companies' progress along NZ pathways. The assessment framework, Table 16, considers six core criteria to determine whether companies have established credible transition plans.

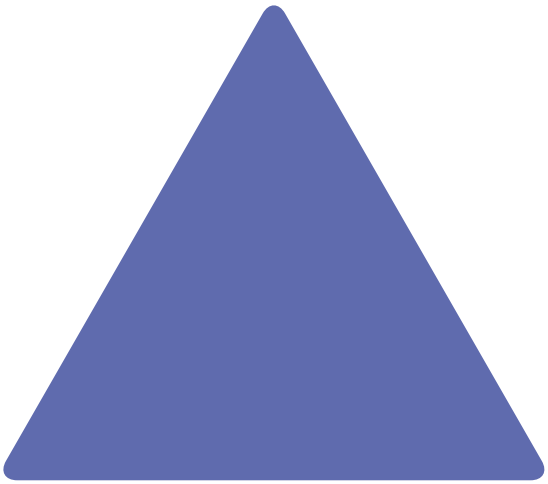
Criteria	Progress to NZ pathway				Assessment Criteria	
	Committed	Aligning	Aligned	Net zero	CA100+	TPI
1. Ambition: A long term 2050 goal consistent with achieving global scenario net zero	X	X	X	X	1	Q3
2. Targets: Emission reduction targets for short & medium term [(1)(3)]		X	X	X	2,3 & 4	Q4, Q7 & Q13
3. Emission Performance: emissions [(1)] intensity relative to targets [(3)]		X	X	X	11	Carbon Performance
4. Disclosure: Disclosure of emissions [(1)(3)]		X	X	X	10,11	Q5, Q8, Q9 & Q12
5. Decarbonisation Strategy: quantified plan to deliver targets			X	X	5	Q18, Q19, Q20
6. Capital Allocation: Verification CAPEX is consistent with NZ pledge			X	X	6	Q21 & Q22
Emissions at or near Net Zero				X		Carbon Performance

[(1)] Scope 1, 2 and material scope 3 emissions
[(2)] A company which is already achieving the emissions intensity required by the sector & regional pathway for 2050
[(3)] High Impact Sectors Only

TABLE 16: NZIF ASSESSMENT FRAMEWORK

The NZIF defines the alignment target as all portfolio companies meeting at least the "aligning" threshold by 2040, and that engagement continues until companies are meeting "aligned" or "net zero."

WYPF uses the objective assessment of companies' progress toward net-zero published by the CA100+ and TPI to establish specific company scores. While, in combination, the approaches represent about half of the companies' value within the portfolio, they do cover most Scope 1 & 2 emissions, Figure 16.



CA 100+	% of equity: 18%
79 companies	% of scope: 1&2 58%
TPI & CA100+	% of equity: 55%
300 companies	% of scope 1&2: 84%
WYPF Portfolio	% of equity: 100%
1,064 companies	% of scope: 1&2 100%

FIGURE 16: COVERAGE OF WYPF PORTFOLIO BY ASSESSMENT METRIC

Having defined the baseline position, we adopt an iterative approach to target setting with the goal of getting all companies to "aligning" at a minimum by 2040 and all companies to Net Zero by 2050, Figure 17. Progress toward these goals will be measured and published annually. It is envisaged that over time, the coverage of the target will expand to cover all assets within the fund, including private equity and infrastructure, and become more comprehensive as data quality improves.

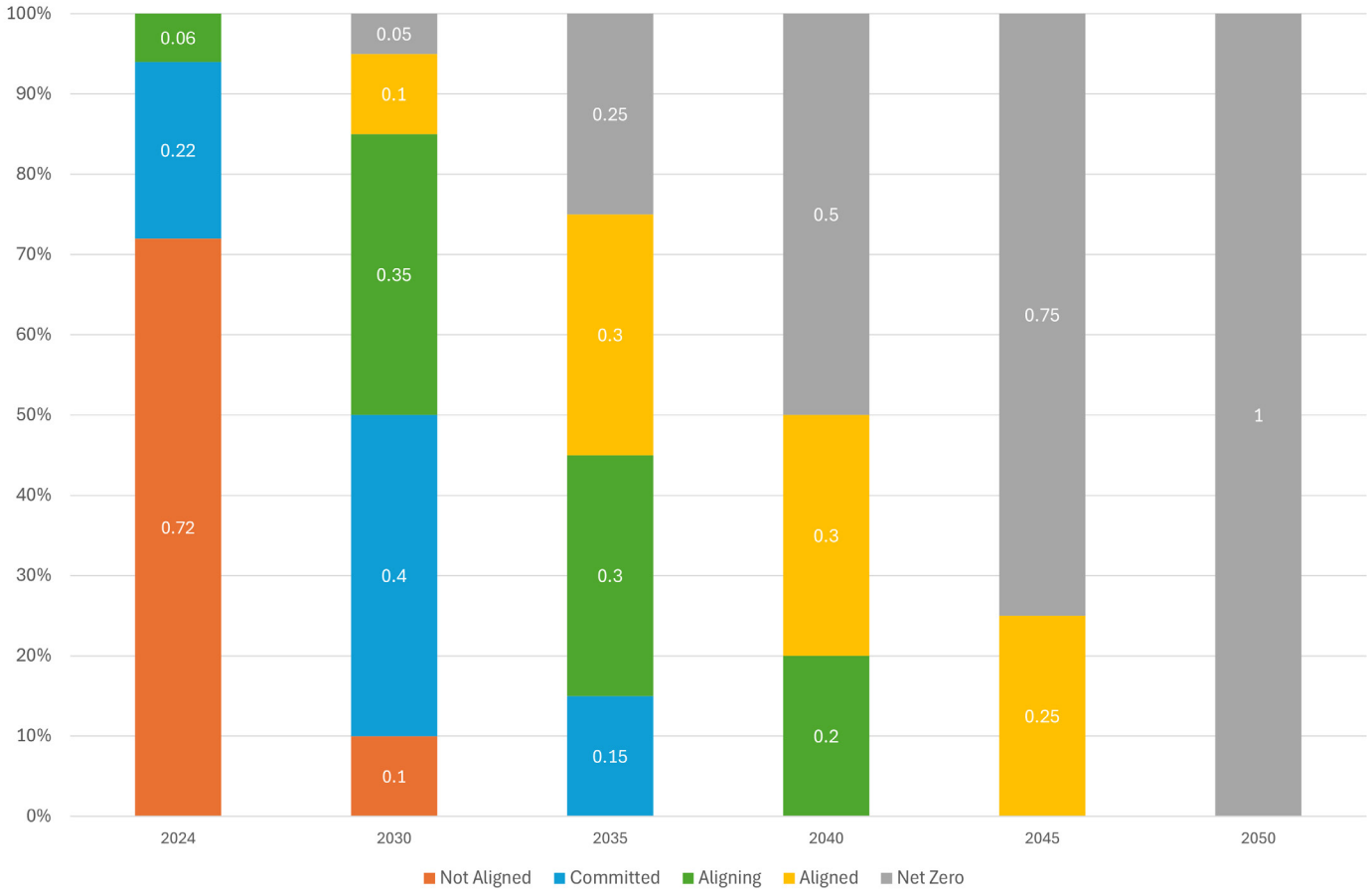


FIGURE 17: FORECASTED ALIGNMENT PROGRESS OF EQUITY PORTFOLIO

6.3.2 Sovereign Debt

The Assessing Sovereign Climate-related Opportunities and Risks (ASCOR) Project has been established by the IIGCC to create a tool giving investors a common understanding of sovereign exposure to climate risk and of how governments plan to transition to a low-carbon economy.

The framework is founded on three pillars:

1. Emission pathways (EP).
2. Climate policies (CP).
3. Opportunities to finance the transition (CF).

While the first two pillars inform investors about the effectiveness and performance of sovereigns in managing climate change, the third pillar, in contrast, sets out the landscape of climate risks and opportunities that countries face. The ASCOR tool provides a comprehensive framework and rigorous country assessments.

Criteria	Progress to NZ pathway				Assessment Criteria
	Committed	Aligning	Aligned	Net zero	ASCOR Indicators
Ambition: A long term 2050 goal consistent with achieving global net zero	X	X	X	X	EP 3a & 2a
Targets: Emission reduction targets for short & medium term [(1)]		X	X	X	EP 2c, 2d, 3b & 3c
Emission Performance: emissions intensity relative to targets [(1)]		X	X	X	EP 1a, 1b & 1c
Disclosure: Disclosure of emissions [(1)(3)]		X	X	X	
Decarbonisation Strategy: quantified plan to deliver targets			X	X	CP 2a, 2b, 2c, 3a, 3b, 3c, 3d, 4a, 4b, 4c, 4d, 4e, CF 2a & EP 2b
Capital Allocation: Verification CAPEX is consistent with NZ pledge			X	X	CF 3a & 3b
Emissions at or near Net Zero				X	

[(4)] Scope 1, 2 and material scope 3 emissions

TABLE 17: NZIF ASSESSMENT FRAMEWORK FOR SOVEREIGNS

Our assessment revealed that most countries had made modest progress in their climate journeys. Of the eleven countries bonds held in the portfolio six, representing 4% of the value of the portfolio were not rated by ASCOR. Of the five remaining while all passed the "Ambition" criteria and therefore are considered "Committed", only 3 met any of the further Criteria that of "Capital Allocation." It should be recognised that the performance of the UK is particularly important since 80% of the value of the fund is invested domestically.

6.4 Target 4: Engagement targets defining the extent of discourse with emitters in relevant sectors.

Whereas the alignment metric should be considered the progress to which assets are moving toward zero pathways, the engagement target gauges the progress by which investors are guiding investments down such pathways. The two targets are not independent: engagement actions and voting will be based on companies' progress on alignment criteria over time.

Consistent with one of the key aims of the NZIF is that we will consider hitting Net Zero in 2050 only a success if we are able similarly reduce the tCO_2e emissions of the companies that we invested in. Reducing the carbon footprint of the fund via divestment, while allowing us to achieve our net zero target, would be a pyrrhic victory if it meant that systemic carbon emitters were not forced into behavioural change.

We discuss our approach to engagement more fully in Section 7.1 of this report. Engagement activities will be focused on investments that are lagging on their NZ efforts. The NZIF establishes that at a minimum 70% of emissions in material sectors should be well established on their decarbonisation pathways (either assessed as “Achieve” or “Aligning” to NZ) or the subject of direct or collective engagement and stewardship actions. This threshold should increase to at least 90% by 2030 at the latest. Companies failing to align could be considered for divestment if there is no reasonable expectation of an improvement in behaviour.

We are members of both the CA100+ and Net Zero Engagement Initiative (NZEI) collaborations which engage with those companies followed by the CA100+ and TPI. We estimate that these initiatives cover 84% of our scope 1 & 2 emissions.

As previously stated, our transition to Net Zero will happen not through divestment but through helping those companies in which we are currently invested adjust to the new realities of climate change. We need to walk a fine line in our engagements; we must be firm but fair to the managements of the companies that we invest in to encourage change but be rigorous in our approach and not be afraid of voting against board proposals to enact change.

7 Policy Advocacy and Market Engagement

We believe that solutions to climate change are the responsibility of every government, company and individual on the planet. All parties need to recognise their role in climate change and adopt swift, realistic, and implementable methods of mitigation. Indeed, an important caveat in our NZIF commitment is made on the expectation that governments and policymakers will implement policy consistent with limiting global warming to 1.5°C.

7.1 Engagement

As a large asset owner invested in securities issued by companies, we believe we have the power to influence these issuers. Our approach to such engagement is outlined in our investment principle #4: WYPF recognises its stewardship responsibilities through engagement and voting.

As part of its regular process to identify, scrutinise and monitor investments, the investment team will have significant contact with investee companies; in the twelve months to March 2024, the team participated in more than six hundred company meetings. We would not necessarily consider such dialogue as engagement. Rather, we define engagement more narrowly and to occur when the following conditions are met:

- We believe we have identified a material failure in a company's approach to strategy or ESG and have identified a preferred outcome. For ESG matters we typically chose to engage for three general reasons:
  - An acute failure of ESG standards or egregious wrongdoing.
  - A chronic concern regarding an individual company's ESG profile.
  - A thematic basis where we want to understand how an individual theme may influence a sector more broadly.
- We have decided the most appropriate point of engagement, whether investor relations/ sustainability for ESG matters, C-level management for matters of strategy or the Chair in the case of governance concerns.
- We have defined a realistic pathway to achieve our goals and identified suitable KPIs to measure our progress.
- We will be realistic regarding the progress of engagements, recognising when we need to escalate.
- We commit to remain open minded about an engagement and will attempt to understand the views of the management. Importantly, we will consider what is in the best interests of the company, rather than solely our self-interest as investors.
- We therefore consider engagement to be a two-way enterprise in that we seek to both inform investee companies of our expectations and understand their thinking on specific topics.
- We further recognise that engagement is a process rather than a one-off action and improved behaviours may take months or even years to achieve. We do, however, expect management to embark in dialogue and act in good faith. We set ourselves realistic time limits and short-, medium – and long-term objectives targets for our engagements.

Typically, an engagement will entail a one-on-one meeting or conference call between a company's investor relations department or a dedicated member of their ESG team and WYPF ESG manager and relevant fund manager. After the meeting the WYPF officers will write up the notes from the meeting and decide whether they consider the company's responses to be satisfactory. If this is not the case WYPF may decide to escalate the issue. The nature of our escalation depends on the specific set of circumstances but could include one or a variety of the following options:

- If management proves unresponsive, we may decide to approach the board chair or NEDs.
- We may choose to vote against or abstain from supporting management proposals or vote against the re-election of specific directors. We believe in holding individual directors to account on areas for which they have lead responsibility.
- Ordinarily, most engagements are conducted privately but on occasion it may make sense to release a press statement to publicly air an issue we believe to be in the public interest.
- We can join collaborative actions with other shareholders.

- We can submit or support shareholder resolutions at company meetings.
- We may want to undertake legal action including participation in Class Actions.
- We can consider divesting our shares. We view this very much as a last resort as we consider our power to influence companies is derived from our economic interest: if we sell our shares, we abdicate our responsibility.

To date our stewardship efforts have been focused on our listed equity positions and not on other asset classes. This reflects both the strong bias of WYPF toward public equities (at 60% of benchmark) and the belief that our ability to influence companies is strongest as a fractional owner of the business.

7.2 Collaboration

We have chosen to align our stewardship initiatives with a small number of like-minded investors when we consider it will be beneficial to our members. We review such partnerships frequently to ensure efficacy, efficiency and focus is maintained.

WYPF is a member of the Local Authority Pension Fund Forum (LAPFF). This is an association of approximately 87 LGPS funds plus six LGPS pools, which conducts engagement work on WYPF's behalf. This approach was chosen as a more efficient method of engagement. Our experience with LAPFF has been a positive one: we share a similar investment outlook and challenges to other LGPS funds that LAPFF represents, believe its scale (at £350bn, seventeen times our own) is a considerable benefit and have a successful and close experience in working together.

LAPFF chooses companies for engagement based on aggregate holdings of its members as well as holdings that pose issues of concern for members. LAPFF engages with companies on a broad range of topics via letters, meetings with boards, attendance at AGMs, and arranging the filing of shareholder resolutions or legal action if appropriate. LAPFF also monitors how effective its engagement has been and reports this to members on a quarterly basis. In the year to March 2024, WYPF engaged via LAPFF with 211 companies on 221 individual engagements

In addition to LAPFF, WYPF has chosen to enter collective engagements organised by specialised interest groups or other asset managers that have specific insight into an ESG issue. Our two most important collaborations are with the CA100+ & Net Zero Engagement Initiative (NZEI).

The IIGCC in conjunction with the PRI engages European CA100+ companies. In August 2024, WYPF joined the **NZEI**, a collaboration co-ordinated by the IIGCC to build and extend the reach of investor engagement. NZEI signatories are invited to co-sign up to 155 letters urging companies beyond Climate Action 100+ to commit to net zero targets and transition plans.

7.3 Advocacy

In addition to company engagement, WYPF will seek to collaborate with other investor groups to advocate for positive change with other market actors.

While most of our engagements will be focused on the asset level, we recognise that many ESG issues, including climate change, transcend individual companies and require action on the national or supranational level. Given our limited leverage we find it advantageous to join collaborations that are more appropriately suited for such engagements.

ShareAction, an NGO that we support, leads an All-Party Parliamentary Group (APPG) on sustainable finance, providing opportunities for the finance & energy sectors to meet with parliamentarians to discuss the policy and regulatory framework needed to unlock sustainable finance. The APPG will enable parliamentarians to better understand how government can shape markets and enable communities to seize the opportunities offered in a Net Zero UK.

In August 2024 WYPF co-signed the Global Investor Statement to Governments on the Climate Crisis. The statement prepared by several international bodies including the UN Finance Initiative, the Principles for Responsible Investment and the IIGCC called for governments to focus their efforts on attaining Paris goals by:

- Enacting climate friendly policies.
- Implementing sectoral transition strategies.
- Addressing nature, water, and biodiversity-related challenges.
- Mandating climate-related disclosures across the financial system.
- Mobilising further private investment into climate mitigation.

8 TCFD Mapping

In 2015 the Financial Stability Board (FSB) created the Task Force on Climate-related Financial Disclosures (TCFD) to enhance the scope and quality of corporate reporting of climate related financial information. WYPF prepared a TCFD report in 2022, describing how its Governance, Strategy, and Risk Management appropriately addressed climate change, and which metrics and target we are using to monitor such risk.

The TCFD proved popular and was soon followed by the formation of the International Sustainability Standards Board (ISSB) by the International Financial Reporting Standards (IFRS), the global accounting standards body. ISSB's introduced new reporting standards, IFRS S1 and IFRS S2. The IFRS S2 Climate-related Disclosures, have adopted many features of the TCFD.

The standards have been widely adopted and led the FSB to disband the TCFD in 2023 with its work integrated into the IFRS. the IFRS Foundation, the parent organisation of the ISSB, has assumed responsibility as the 'centralized authority' for monitoring corporate progress on climate disclosures. The UK authorities are expected to endorse the IFRS S1 & S2 in 2025 creating the UK Sustainability Reporting Standards.

Table 18 indicates where in this document the specific TCFD reporting requirements may be found.

TCFD reporting requirement	Relevant Section
GOVERNANCE	
Describe the board's oversight of climate-related risks and opportunities.	3.2
Describe management's role in assessing and managing climate-related risks and opportunities	3.3
STRATEGY	
Describe the climate-related risks and opportunities the organisation has identified over the short, medium, and long term.	3.3/4
Describe the impact of climate-related risks and opportunities on the organisation's businesses, strategy, and financial planning	3.4
Describe the resilience of the organisation's strategy, taking into consideration different climate related scenarios, including a 2°C or lower scenario.	3.4
RISK MANAGEMENT	
Describe the organisation's processes for identifying and assessing climate-related risks	3.4
Describe the organisation's processes for managing climate-related risks.	3.4
Describe how processes for identifying, assessing, and managing climate-related risks are integrated into the organisation's overall risk management.	3.4
METRICS AND TARGETS	
Disclose the metrics used by the organisation to assess climate-related risks and opportunities in line with its strategy and risk management process	4.5
Disclose Scope 1, Scope 2, and if appropriate, Scope 3 greenhouse gas (GHG) emissions, and the related risks	5.1/2
Describe the targets used by the organisation to manage climate-related risks and opportunities and performance against targets	6

TABLE 18: RECONCILIATION OF THE NZIF REPORTING STRUCTURE WITH TCFD

9 Glossary

The rapidly growing discipline of carbon targeting has produced a plethora of acronyms that have been reference in this document.

Term	Definition
CA100+	The Climate Action 100+ investor initiative provides analysis of the decarbonisation strategies of the largest 163 global emitters. Its members collaboratively engage with these companies to encourage adoption of Net Zero pathways.
CCUS	Carbon Capture Usage and Storage technology that allows CO_2 emissions to be physically removed, usually at the point of creation e.g. at power plants.
Carbon Emission	The emission of Greenhouse gases (GHG) as defined by the Kyoto agreement that are considered to be responsible for climate change.
Institutional Investors Group on Climate Change (IIGCC)	IIGCC is a leading European investor membership body focused specifically on climate change. Its frameworks defined the methodology used in this report.
Owned Emissions	Are the pro-rata emissions of those companies in which we invest. For example, if we owned ½ of 1% of the enterprise value (meaning the combined value of both its equity and & debt) of a company emitting 10mnt of CO_2e, our owned emissions from this investment would be 50,000 TCO_2e. The fund's carbon footprint is the aggregate total of these emissions.
Net Zero	The idea that individuals, companies, and countries can cut carbon emissions drastically to avoid further climate change. "Net" is used as standards permit up to 10% of emissions to be offset.
Net Zero Investment Framework (NZIF)	The Net Zero Investment Framework, published in March 2021, provides a common set of recommended actions, metrics and methodologies through which investors focus their Net Zero efforts.
Pathway	The emissions, technologies and investment trajectories that will be needed to deliver net zero.
Paris Aligned Investment Initiative (PAII)	Paris Aligned Investment Initiative was devised by the IIGCC as a framework by which investors can align portfolios to Net Zero.
Paris Aligned Asset Owners (PAAO)	Paris Aligned Asset Owners (PAAO) goal to decarbonise the fund by 2050. The PAAO is a group of 57 asset owners, with over $3.3 trillion in assets under management, committed to supporting the goal of net zero greenhouse gas emissions by 2050 or sooner, in line with global efforts to limit temperature warming to 1.5ºC above pre-industrial levels.
Paris Agreement	The Paris Agreement is a legally binding international treaty on climate change adopted by 196 Parties entering into force on 4 November 2016.
Carbon Offset	A mechanism by which net emissions can be reduced, either through the purchase of carbon credits or through direct carbon capture e.g. through tree planting.
Reference Targets	The four explicit Targets investors are expected to pursue in the aim of achieving net zero, see Table 14 & 15.
Scenarios Analysis	An assessment of the potential impact of climate change on the fund under a variety of climate assumption
Science Based Targets Initiative (SBTI)	The SBTI was established in 2015 to help companies to set rigorous emission reduction targets in line with climate sciences. More than 5,000 companies have joined the initiative.

Term	Definition
Scope 1, 2 & 3	Are terms used to describe the source of carbon emissions: Scope 1: those emissions directly generated by a company's activities, examples include the burning of gas for heating an office or fuel for a delivery truck. Scope 2: These are emissions generated by the generation of power used by a business by a third party, for example, the generation for electricity used to drive machinery. Scope 3: Other emissions used throughout the value chain. The GHG protocol identifies 15 categories ranging from emissions associated with purchased goods and services to those pertaining to business travel.
Systemic emitter	A company identified by the CA100+ as one of 180 global businesses responsible of c80% of emissions
TCFD	The Task Force on Climate-Related Financial Disclosures requires funds to identify, measure and disclose climate risks to the fund.
TPI	The Transition Pathway Initiative is a global, asset-owner led initiative which assesses companies' preparedness for the transition to a low carbon economy.
WACI	Weighted Average Carbon Intensity. Our preferred adjusted measure of the intensity of carbon emissions of a fund: ∑ ((Value of investment / Current portfolio value) × (Issuer's Scope 1 & 2 GHG emissions / Issuer's $M revenue))


West Yorkshire Pension Fund