



# Climate disclosures for year ended 5 April 2025

Produced by: The Trustee Directors (“the Directors”) of the Plumbing & Mechanical Services (UK) Industry Pension Scheme (“the Scheme”)

Date: 5<sup>th</sup> April 2025

# Introduction

Climate change is affecting the planet, causing extreme weather events, impacting crop production and threatening Earth's ecosystems. Understanding the impact of climate change and the Scheme's vulnerability to climate-related risks will help us to mitigate the risks and take advantage of any opportunities.

UK regulations require trustees of pension schemes with more than £1bn in assets to meet certain climate governance requirements and publish an annual report on their scheme's climate-related risks.

Better climate reporting should lead to better-informed decision-making on climate-related risks. And on top of that, greater transparency around climate-related risks should increase accountability and provide decision-useful information to investors and beneficiaries.

This report is the annual climate disclosures for the Scheme for the year ended 5 April 2025. This report has been prepared by the Directors in accordance with the regulations set out under The Occupational Pension Schemes (Climate Change Governance and Reporting) Regulations 2021 (the "Regulations") and is aligned to the Taskforce for Climate-related Financial Disclosures ("TCFD") framework.

The four elements covered in the report are:

- |                             |   |
|-----------------------------|---|
| <b>Governance:</b>          | The Scheme's governance around climate-related risks and opportunities.   |
| <b>Strategy:</b>            | The potential impacts of climate-related risks and opportunities on the Scheme's strategy and financial planning. |
| <b>Risk Management:</b>     | The processes used to identify, assess and manage climate-related risks.  |
| <b>Metrics and Targets:</b> | The metrics and targets used to assess and manage relevant climate-related risks and opportunities.               |



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# Executive summary

This report sets out the actions that we, the Directors, have taken to understand the potential impact climate change could have on the Scheme.

We have worked closely with our investment adviser, Aon, to identify the climate-related risks and opportunities faced by the Scheme, and to understand ways we can manage and mitigate those risks.

## Overview of the Scheme

The Scheme invests across a range of assets including equities, property, infrastructure, credit, inflation protecting illiquids and a Liability Driven Investment (“LDI”) strategy. We also continue to hold a pensioner buy-in. Within this report we consider the impact of climate related risks on those asset classes, the investment strategy and potential impact on the funding of the Scheme.



### Governance

We, the Directors, are responsible for the oversight of all strategic matters relating to the Scheme, this includes climate-related risks and opportunities.

We have delegated the oversight and day-to-day implementation of the Scheme’s climate change risk management framework to the Investment, Funding & Covenant Committee, which is a sub-committee of the Trustee Board. More details can be found on pages 5-8.



### Strategy

Our qualitative analysis of climate related risks and opportunities showed that the asset classes in which the Scheme invests are impacted to some degree by climate-related risks. And over time, the risk exposure is expected to increase.

We also identified some climate-related investment opportunities for the different asset classes. More details of the risks and opportunities identified for the Scheme’s investments can be found on pages 9-20.

We reviewed the climate scenario analysis undertaken as at 30 June 2022 and we are comfortable that the analysis remains appropriate for this year’s report as there have been no significant changes to the investment strategy, the liability profile/membership of the Scheme, the modelling techniques, significant shift in policy implementation to tackle climate change or asset data availability.



### Risk Management

We have established a process to identify, assess and manage the climate-related risks and opportunities the Scheme is exposed to. This is integrated into the Scheme’s wider risk management framework.

Our climate risk management framework is set out on pages 21-25, which assists with the ongoing management of climate related risks and opportunities. Alongside this, the Directors

undertake periodic training on responsible investment to understand how ESG factors, including climate change, may impact the Scheme's assets and liabilities.

We have a clear policy on stewardship outlined in our Statement of Investment Principles, which can be found here: <https://www.plumbingpensions.co.uk/investments>



## Metrics and Targets

### Metrics

We have disclosed information on four climate-related metrics for the Scheme:

- Total Greenhouse Gas ("GHG") Emissions;
- Carbon Footprint;
- Data Coverage;
- Implied Temperature Rise.

Overall, there has been a decrease in total scopes 1 and 2 GHG emissions across the portfolio, as well as an improvement in data coverage across most asset classes. More details can be found on pages 26-33.

### Targets

We set the following targets for the Scheme in 2022:

- Credit Portfolio target: Improve data coverage to 75% in three years' time
- Total Portfolio target: Improve data coverage to 90% in three years' time

Over the two consecutive reporting years we have observed an improvement in the data coverage for both targets. Whilst we are close to the overall portfolio target of 90% data coverage, the data coverage for credit lags behind. This is primarily due to the challenge in obtaining meaningful data for asset backed securities ("ABS"). Given the progress to date and ongoing challenge with data for the ABS fund we have decided to extend the timeframe for achieving our targets to 2028.

For further information on the targets for our Scheme please refer to pages 32-33.

We hope you enjoy reading this report and understanding more about how we are managing climate-related risks and opportunities within the Scheme.

A handwritten signature in black ink, consisting of the letters 'PP' followed by a period.

Andy McKinnell, on behalf of the Trustee Directors of the Plumbing & Mechanical Services (UK) Industry Pension Scheme.

# Governance

Governance is the way the Scheme operates and the internal processes and controls in place to ensure appropriate oversight. Those undertaking governance activities are responsible for managing climate-related risks and opportunities. This includes us, as the Directors, and others making Scheme-wide decisions, such as those relating to the investment strategy or how it is implemented, funding, the ability of the sponsoring employer to support the Scheme and liabilities.



# Our Scheme's governance

As the Directors of the Scheme, we are responsible for overseeing all strategic matters related to the Scheme. This includes the governance and management frameworks relating to environmental, social and governance ("ESG") considerations and climate-related risks and opportunities.

We agreed our climate-related beliefs and our approach to managing climate change risk. These are set out in the Scheme's Statement of Investment Principles ("SIP"), which is reviewed at least every three years (or sooner in the event of a significant change in investment policy) by the Directors.

## Our climate beliefs

We believe that the risks associated with climate change can have a materially detrimental impact on the Scheme's investment returns within the timeframe that we are concerned about and, as such, we integrate assessments of climate change risk into our investment decisions.

We believe that climate-related factors may create investment opportunities. Where possible, and appropriately aligned with our strategic objectives and fiduciary duty, we will seek to capture such opportunities through the Scheme's investment portfolio.

We assess climate related risks and opportunities over multiple time horizons. We have decided the most appropriate time horizons for the Scheme are:

- short term: 1-3 years
- medium term: 4-10 years
- long term: 11-20 years

Climate-related risks and opportunities are integrated into our risk management framework so we can maintain oversight of the climate-related risks and opportunities that are relevant to the Scheme.

We receive regular training on climate-related issues, when appropriate, to develop the appropriate degree of knowledge and understanding on these issues to support good decision-making.



We expect our advisers to bring important and relevant climate-related issues and developments to our attention in a timely manner, informing us of their relevance to the Scheme and incorporating climate related issues into advice.

We have delegated oversight and day-to-day implementation of the Scheme's climate change risk management framework to the Investment, Funding and Covenant ("IFC") Committee, which is a sub-committee of the Trustee Board.

## Role of the Investment, Funding and Covenant ("IFC") Committee

The IFC monitors and reviews progress against the Scheme's climate change risk management approach on an annual basis. The IFC will keep the Trustee Board apprised of any material climate-related developments through regular (typically annual) updates.

The key activities undertaken by the IFC, with the support of the Directors' advisers, are:

- ensuring the investment strategy or any implementation proposals consider the impact of climate risks and opportunities;
- engaging with the Scheme's investment managers to understand how climate-related risks are considered in their investment approach;
- working with the investment managers to disclose relevant climate-related metrics as set out in the TCFD recommendations;
- ensuring that stewardship activities are being carried out appropriately by the investment managers on the Scheme's behalf;
- monitoring and reviewing progress against the Scheme's risk management framework.

## How we work with our advisors

We expect our advisers and investment managers to bring important climate-related issues and developments to our attention in a timely manner. We expect our advisers and investment managers to have the appropriate knowledge on climate-related matters.

**Investment adviser** – our investment adviser, Aon, provides investment-related strategic advice and support on our climate-related risks and opportunities. This includes regular training and updates on climate-related issues, climate change scenario modelling and ESG ratings for investment managers.

The Directors will monitor the quality of climate-related support and advice from its investment adviser as part of an annual review against the investment consultant's objectives.

**Scheme Actuary** - the Scheme Actuary, Willis Towers Watson, helps us assess the potential impact of climate-related risks on the Scheme's funding where relevant.

As part of its assessment of its advisers' climate-related competence, the Directors will seek to understand how climate-related factors affect the funding

### Directors update

The Trustee Directors have collected carbon data from its investment managers.

It has been supported in this exercise by IFC and its investment adviser. The IFC worked with the Scheme's investment adviser to complete this as far as reasonably possible. This has involved engaging with managers where gaps in data have been identified to be able to improve disclosures.



assumptions used for the Scheme, and which sources of expertise the Scheme Actuary has used in determining the appropriate assumptions to use.

**Covenant adviser** - our covenant adviser, Interpatch Advisory, helps us understand the potential impact of climate-related risk on the industry and employer covenant for the Scheme.

# Strategy

It is crucial to think strategically about the climate-related risks and opportunities that will impact the Scheme if we are to stand a chance of mitigating the effects of climate change.

Assessing the climate-related risks and opportunities the Scheme is exposed to is key to understanding the impact climate change could have on the Scheme in the future.



# What climate-related risks are most likely to impact the Scheme?

We carry out a qualitative risks and opportunities assessment of the asset classes the Scheme is invested in. From this we identify which climate-related risks could have a material impact on the Scheme. We also identify suitable climate-related opportunities.

Given the number of asset classes used in the Scheme, we completed this exercise to the best of our ability. To help us with our assessment, we surveyed our investment managers asking them to rate the climate-related risks and opportunities they believe their fund(s) is(are) exposed to.

## Our investments

The Scheme's investment portfolio is diversified across a range of different asset classes including equities, credit, property, infrastructure, liability drive investments ("LDI") and inflation protecting illiquids.

Asset Class	LDI	Equities	Property	Infrastructure	Credit	Inflation Protecting Illiquids
Asset Allocation	47.3%	5.2%	8.4%	6.3%	23.9%	6.5%

Asset allocations as at 30 June 2024. Numbers may not add up due to rounding. Cash excluded from asset allocation but is equal to c.2.4%.

## How the qualitative risk assessment works



### Risk categories

In the analysis, the climate-related risks have been categorised into physical and transition risks.

**Transition risks** are associated with the transition towards a low-carbon economy.

**Physical risks** are associated with the physical impacts of climate change on companies' operations.

More details about transition and physical risks can be found in the [Appendix](#).



### Ratings

The analysis uses a RAG rating system where:

**Red** denotes a higher level of financial exposure to a risk.

**Amber** denotes a medium level of financial exposure to a risk.

**Green** denotes a lower level of financial exposure to a risk.



### Time horizons

We assessed the climate-related risks and opportunities over multiple time horizons considering the liabilities of the Scheme and its obligations to pay benefits. We decided the most appropriate time horizons for the Scheme are:

short term: 1-3 years

medium term: 4-10 years

long term: 11-20 years

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## Qualitative assessment

### Climate-related risks

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#### Key conclusions

Diversification across asset classes, sectors and regions is important to manage both climate-related physical and transition risks for the Scheme.

Credit accounts for a significant part of the Scheme's portfolio and has been rated red (i.e. a higher level of financial exposure to risk) for some risks particularly in the long-term. Acute and chronic physical risks become more material as we approach the medium- and long-term time horizon when these events are expected to become increasingly frequent and severe. Regulatory risks are important risk factors in the long-term, particularly in high-risk sectors such as consumable fuels and utilities. The policing of emissions and holding corporates accountable for sustainability will intensify reputational risks in the medium and long-term. Substitution technologies will be a medium- to long-term disruption to industries.

LDI is also a significant portion of the Scheme's assets and is rated green (i.e. a lower level of financial exposure to risk) in terms of exposure to climate-related risks particularly in the short-and medium-term. However, transition risks are rated amber in the long-term as policy changes impact demand patterns, which may cause gilt yields to rise.

Passive equities account for a small portion of the portfolio and according to the manager's assessment are rated amber or red over the medium- and long-term. Physical risks are rated amber in the medium- and long-term as acute and chronic physical risk exposure is expected to increase over time. The manager considers transition risks to be low in the short-term but the impact of regulatory risks and market risks in the long-term is rated high.

The property manager rates transition risks mainly amber. This is driven by increase expenditure and debt associated with complying with regulations and risk of stranded assets. The risks identified this year for property differ from last year due to change in the process adopted by the manager. This year the manager evaluated each asset in the fund against the same carbon scenario projected to different time horizons to reflect short-, medium-, and long-term time horizon and also took into consideration potential changes in Minimum Energy Efficiency Standard regulations.

For the inflation protecting illiquids portfolio, the manager has rated regulatory and reputational risks as amber in the medium- and long-term. The manager believes there are regulatory and reputational risks for real estate if managers fail to meet relevant climate-related targets and reducing emissions.

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The tables on the next page summarise the transition and physical risks for each asset class the Scheme is invested in. Each table is based on ratings and commentary provided by the managers.



**LGIM – Passive Equities – 5.2% of portfolio****Physical Risks**

	Acute	Chronic
Short	G	G
Medium	A	G
Long	A	A

The manager does not expect material climate-related financial impact at a global equity index level in the short term. However, medium term acute physical risk exposure is likely to increase, with chronic risks still not posing a material risk. When approaching the long-term horizon, the risks associated with extreme weather events are likely to cause business interruptions and have a negative effect on economic performance, having an overall growing impact at the portfolio level. The manager believes that uncertainty around future climate pathways could make some geographies 'uninsurable' resulting in write-offs of productive assets.

Source: LGIM

**Transition Risks**

	Regulatory	Technology	Market	Reputation
Short	A	G	G	G
Medium	R	A	A	A
Long	R	A	R	A

The manager considers the transition risks to be low in the short-term but is still wary of the impact carbon policies may have on companies. The manager believes with climate policy changes, expectation of companies' earnings are expected to be volatile. The manager believes that those that are ill-prepared for adopting low-carbon technologies will face severe risks. The growing demand and supply of key raw materials for low-carbon technologies resulting in a large drop in fossil fuel use is likely to have large financial repercussions at a global equity index level, alongside the rising price of carbon which also poses significant risks going forward. Reputational risks in the long-term are likely, arising from loss of social licenses<sup>1</sup> and social unrest if climate policy is not addressed sufficiently.

**DTZ – UK Property – 8.4% of portfolio****Physical Risks**

	Acute	Chronic
Short	G	G
Medium	G	G
Long	G	A

The manager carried out analysis using a third-party climate-risk tool, Climate X, and deemed acute climate risks to have a minimal impact on the fund over all time frames given that most of its assets are UK based and have minimal exposure to acute climate risk. For chronic physical risks, however, the manager identified events such as extreme heat and landslides to pose risks to its holdings in the long-term due to the UK's morphology.

Source: DTZ

**Transition Risks**

	Regulatory	Technology	Market	Reputation
Short	A	A	G	G
Medium	A	A	A	A
Long	A	G	G	G

In the short-term, the manager has identified that regulations and compliance to improve efficiency standards pose a mild risk to the portfolio. In addition, increased capital expenditure used to comply with these regulations and to reduce stranded assets poses risk to the fund, thus the manager has identified technology and regulatory risks as medium risks.

In the medium-term the transition to cleaner energy may impact some of the fund's holdings due to decreased demand from customers and increased liability through the risk of stranded assets.

<sup>1</sup>Social license to operate refers to the agreement regarding the acceptability or legitimacy of one's operation from the perspective of their relevant stakeholders beyond regulation.

## CBRE – Inflation Protection Securities Fund – 6.5% of portfolio

### Physical Risks

	Acute	Chronic
Short	G	G
Medium	G	G
Long	G	G

The fund has a low average exposure to acute and chronic physical climate hazards across all time horizons as indicated by the low rating in the table above. The manager utilises the Moody's Physical Risk Tool methodology. Based on this analysis, it was concluded that the portfolio has a medium average exposure to floods, low exposure to hurricanes and typhoons (i.e., extreme winds), and generally no exposure to sea level rise. Individual assets might have different exposures to individual hazards.

Source: CBRE

### Transition Risks

	Regulatory	Technology	Market	Reputation
Short	G	G	G	G
Medium	A	G	G	A
Long	A	G	G	A

The manager believes there are reputational risks for real estate managers in medium and long term due to managers failing to set and meet relevant climate-related targets and reducing emissions. The manager is managing reputation based transitional risks through underlying asset-level processes from energy performance certificates performance management to Carbon Risk Real Estate Monitor analysis and green building certifications programs. To effectively manage policy and legal risks, the manager has its Sustainability and Legal and Compliance teams, as well as external advisors and technical consultants, monitoring for policies and regulations that apply to its business.

## Insight – Asset Backed Securities Fund – 11.8% of portfolio

### Physical Risks

	Acute	Chronic
Short	G	G
Medium	A	A
Long	A	A

The manager does not see material financial impacts in the short-term as the risks associated with acute and chronic weather risks such as floods, wildfires and hurricanes have had a limited impact on corporate issuers' financials. The manager identifies acute and chronic risks becoming a more material impact as we approach the medium to longer-term horizon where these impacts will become increasingly frequent and severe.

Source: Insight

### Transition Risks

	Regulatory	Technology	Market	Reputation
Short	G	G	G	G
Medium	A	A	A	A
Long	A	A	A	A

The manager believes policy risks arise mostly from deeper carbon cuts as a result of policy changes, but that such policy actions are likely to be delayed beyond the medium term. Substitution technologies such as hydrogen-based technology are likely to take time before becoming cost competitive and therefore will be a medium to longer-term disruption to industries at scale.

## PIMCO – Multi Asset Credit Fund – 12.1% of portfolio

### Physical Risks

	Acute	Chronic
Short	G	G
Medium	A	A
Long	R	R

The manager does not see material financial impacts in the short-term as the risks associated with acute and chronic weather risks such as floods, wildfires and hurricanes have had a limited impact on corporate issuers' financials. The manager identifies acute and chronic risk becoming a more material impact as we approach the medium-term horizon where these impacts will become increasingly frequent and severe. Over the long-term the investment manager sees risks from extreme weather events as becoming exacerbated affecting corporate issuers financials and therefore labelling it as a high-risk.

Source: PIMCO

### Transition Risks

	Regulatory	Technology	Market	Reputation
Short	G	G	G	A
Medium	G	G	G	R
Long	A	A	A	R

The manager believes policy risks are the most important risk factors in the long-term, particularly in high-risk sectors such as consumable fuels and utilities. In the long run the policing of emissions and holding corporates accountable to sustainability will be at its peak, thereby intensifying reputation risks in the medium and long-term. Technology substitution is a risk enhancer as new technologies strip out the need for oil and gas production and distribution, a key growth factor in these high-risk sectors.

## LGIM – LDI – 47.3% of portfolio

### Physical Risks

	Acute	Chronic
Short	G	G
Medium	G	G
Long	A	G

The manager does not see material financial impacts in the short-term and medium-term. These risks are relatively geographically concentrated and not expected to have material financial impact on UK sovereign bonds, although there is some risk over the longer-term.

Source: LGIM

### Transitional Risks

	Regulatory	Technology	Market	Reputation
Short	G	G	G	G
Medium	G	G	G	G
Long	A	A	A	G

Policy changes such as carbon pricing will cause demand patterns to shift over the medium and long terms and may be accompanied by changing market sentiment independent of policy change. It is likely that many fossils fuel exporting countries see relatively larger losses in GDP, depending on the ambition of global policy and resulting demand patterns. As a result, they may see their credit ratings fall and yields increase, with some impact on investors' global sovereign bond portfolios.

## KKR – Infrastructure – 6.0% of Portfolio

*KKR were unable to complete the climate risk and opportunities questionnaire. However, they were able to provide their sustainability report that covers how they consider both physical and transition risks on the firm level.*

### Physical risks

On the firm level, the manager identified that physical risks had potentially higher impacts on specific sectors such as energy, transportation, manufacturing, and real estate. Acute risks associated with increased severity of extreme weather events such as floods and storms are more likely to have an impact on communications technology and healthcare and information. The manager found that physical risks did not have a significant impact on the retail, financial and consumer technology sectors but does highlight these sectors will experience secondary impacts from the other more affected sectors.

### Transition risks

On the firm level, the manager identified that risks associated with transitioning to a low-carbon economy affected sectors such as energy, transportation, manufacturing, and real estate to a greater extent. The manager highlights that these companies have a more pressing need to mitigate these risks as well as gaining greater insights in the extent of these impacts and potential mitigation and adaption options to ensure these risks are minimal.

*Source: KKR*

## Climate-related opportunities

We identified some climate-related opportunities which may be suitable for the asset classes we invest in. These opportunities are valid over the short-, medium- and long-term time horizons:

<b>Passive Equity</b>	<p>Industrial, utility, and basic materials sectors are among the most exposed to transition risks but may also see the greatest opportunity going forward. As electric vehicles, renewables and other alternative fuels become cheaper relative to conventional alternatives, companies stand to benefit significantly from this growth. While not all participants in these growing markets are likely to be captured in today's global equity indices, many existing corporates are likely to profit significantly. Within-sector variation in climate-related valuation impact is expected to be large, especially in the most exposed sectors. Those companies that are formulating effective transition plans today and committing the required capital are among the most likely to benefit.</p> <p>Volume growth and investment returns are not intrinsically correlated. Thematic focus on constraints will be required to protect returns. Investors should focus on three areas to evaluate opportunities and produce targeted investment strategies: geological scarcity, technological innovation, and regulatory change.</p>
<b>Property</b>	<p>The manager has identified opportunities in relation to the transition to a low carbon economy with respect to the short and medium-term horizon.</p> <ul style="list-style-type: none"> <li>▪ <i>Short-term opportunities</i> There is an opportunity to develop 'green assets' as well as 'net-zero' investment offerings creating a decarbonisation pathway.</li> <li>▪ <i>Medium term opportunities</i></li> </ul>



The manager identifies energy efficiency such as adopting renewable and other lower-emission sources as a climate-related investment opportunity. Other potential opportunities arise from development of climate-friendly products such as 'green assets' and 'net-zero' products.

**Multi Asset  
Credit**

Whilst not the principal driver or main objective of the Scheme's portfolio, climate risks are a consideration in all investments at the manager level. As of 31 December 2024, the Scheme's portfolio held 1.9% in green bonds. The manager uses a top-down macroeconomic investment approach with bottom-up research to arrive at climate-related opportunities. The Manager also utilises its extensive team comprised of 75+ credit research analysts to assess investments based on several ESG factors.

**Inflation  
Protection  
Illiquid Fund**

In the short-term, the Manager is seeing increasing demand from tenants and the wider market for low carbon and climate resilient buildings. As such, the Manager is developing mitigation plans to address any climate-related risks present in its portfolios. In practice, this means that the Manager will look at investing in low-carbon options, and work with underlying managers to also make these necessary investments. This could include options such as, but not limited to, rooftop photovoltaics, highly energy efficient heating, ventilation, and air conditioning (HVAC) systems, sustainable transport options and accessible and healthy buildings.

In the medium-term, the broad principles identified in the short-term are expected to largely hold true. However, there are risks that occupier demands and taste change, often over a short period of time. A good example in recent years is the demand for office space immediately following the pandemic. As such is it essential keep up to date with real estate market demand and trends. Over the long term, occupier demand can change significant, for example due to technological and social changes and their impact on how businesses function and the way people work. The Manager is constantly reviewing best practice solutions and technologies in the market, keeping up to date with real estate market demand and trends, and seeks to continuously improve its climate-related analyses and approaches in line with the latest science.

**Infrastructure**

The Manager recognises that from an investor's perspective, companies that are more likely to be affected by physical or transition climate issues have a more pressing need to, and may be more motivated to, anticipate, mitigate and/or avoid risks, as well as gain greater insights into the extent and complexity of impacts, associated costs, and mitigation and adaptation options. With such companies, there is often an opportunity to create value by engaging and working with them to address climate issues. As part of the Manager's climate action strategy, it is helping its portfolio companies seize these opportunities by developing and sharing resources on key topics such as measuring greenhouse gas ("GHG") emissions, assessing climate risk, and setting climate targets.

**LDI**

Within-sector variation in climate-related valuation impact is expected to be large, especially in the most exposed sectors. Those governments that are formulating effective transition plans today and committing the required capital to ensure economic prosperity alongside decarbonisation going forward are among the most likely to benefit. Beyond the low-carbon technologies already in use today, there are also many potential innovative solutions that could present opportunities. These include carbon capture and storage, direct air capture, low- or zero-carbon hydrogen and ammonia production and nature-based solutions.

It should also be said that just as sovereign bond investors are shielded from some of the downside risk from a low-carbon transition compared to equity investors, they will be unable to profit from much of the upside risk of climate-related opportunities.

Source: Managers.

*There were no specific climate related opportunities identified by the Asset Backed Securities Fund Manager.*

# How resilient is the Scheme to climate change?

In 2022, we carried out climate change scenario analysis to better understand the impact climate change could have on the Scheme's assets and liabilities.

The analysis looks at three climate change scenarios plus the base case scenario. We chose these scenarios because we believe that they provide a reasonable range of possible climate change outcomes. The climate scenarios are compared to a base case scenario, which is based on what is priced into the market at the effective date of the modelling.

Each climate scenario considers what may happen to the Scheme when transitioning to a low carbon economy under different temperature-related environmental conditions. These scenarios were developed by Aon and are based on detailed assumptions. They are only illustrative and subject to considerable uncertainty.

The climate scenarios intend to illustrate the climate-related risks the Scheme is currently exposed to, highlighting areas where risk mitigation could be achieved through changing the investment portfolio.

Other relevant issues such as governance, costs and implementation (including manager selection and due diligence) must be considered when making changes to the investment strategy.

Investment risk is captured in the deviance from the base case scenario, but this is not the only risk that the Scheme faces. Other risks include covenant risk, longevity risk, timing of member options, and operational risks.

## Directors update

Under the Regulations, climate scenario analysis must be carried out at least every 3 years, with an annual review in each intervening year to confirm the most recent analysis is still appropriate.

We reviewed the scenario analysis completed as at 30 June 2022 and we are comfortable that the analysis remains appropriate for this year's report. There have been no significant changes to the investment strategy, the liability profile/membership of the Scheme, the modelling techniques, significant shift in policy implementation to tackle climate change or asset data availability.

## Climate scenarios in more detail

The table below describes each climate scenarios and the impact on the Scheme over the short-, medium- and long-term time horizons. We undertook three scenarios and have summarised them below.

Base case	Summary of the Scenario	Summary of the impact to the Scheme
<p>Temperature rise +2°C- 2.5°C</p> <p>Reach net-zero 2050</p> <p>No introduction of environmental regulation</p>	<p>The base case is based on world events unfolding in a fashion consistent with Aon's Capital Market Assumptions, which are based on the long-term consensus views of what is priced into the market (at the effective date of the modelling).</p> <p>Emission reductions start now and continue in a measured way in line with the objectives of the Paris Agreement and the UK government's legally binding commitment to reduce emissions in the UK to net zero by 2050.</p>	<p>The Scheme's funding level continue to increase steadily proving to be the most stable scenario for the Scheme. In the medium term the growth starts to accelerate and by the end of the modelling period the funding level is at a stable position.</p>
No Transition Scenario	Summary of the Scenario	Summary of the impact to the Scheme
<p>Temperature rise +4°C</p> <p>Reach net-zero After 2050</p> <p>No introduction of environmental regulation</p>	<p><b>In the short term:</b></p> <p>No agreed global action is taken to combat climate change.</p> <p><b>In the medium term:</b></p> <p>The world economy remains oriented towards improving near-term economic prospects, with companies and governments taking a "Business as usual" approach.</p> <p><b>In the long term:</b></p> <p>While some climate change policies are implemented, global efforts are insufficient to halt significant global warming. The physical effects of climate change become more severe. The headwinds facing the economy and markets grow.</p>	<p><b>In the short term:</b></p> <p>The Scheme's funding level improves steadily.</p> <p><b>In the medium term:</b></p> <p>Although initially the funding level improves, by the end of the period the funding level starts deteriorating and drops significantly.</p> <p><b>In the long term:</b></p> <p>The funding level does not recover by the end of the 30 year modelling period and is the worst case scenario for the Scheme. Although it is reasonable to assume that the Scheme's liabilities may be smaller at that time, the Scheme could be materially worse off in terms of surplus relative to the base case, which may place a strain on the Sponsor covenant.</p>
Orderly Scenario	Summary of the Scenario	Summary of the impact to the Scheme
<p>Temperature rise +1.3 °C -2°C</p> <p>Reach net-zero 2050</p> <p>Coordinated environmental regulation</p>	<p><b>In the short term:</b></p> <p>Immediate coordinated global action is taken to tackle climate change. Growth assets perform poorly.</p> <p><b>In the medium term:</b></p> <p>The rapid transition to clean technologies and green regulation begins to boost economic growth.</p> <p><b>In the long term:</b></p> <p>Economic growth continues. This represents the fastest transition to a green economy, combined with limited physical impacts from climate change despite the large initial cost of the transition.</p>	<p><b>In the short term:</b></p> <p>The funding level deteriorates due to growth assets performing poorly.</p> <p><b>In the medium term:</b></p> <p>The shift to clean energy starts to result in economic growth and the funding level recovers sharply.</p> <p><b>In the long term:</b></p> <p>By the end of the modelling period the funding level recovers but lags that of the Base Case.</p>

## Disorderly Scenario

Temperature rise  
<3°C

Reach net-zero  
after 2050

Late and aggressive  
environmental  
regulation

### Summary of the Scenario

#### In the short term:

Insufficient consideration is given to long-term policies and there is no action taken to combat climate change

#### In the medium term:

Late but coordinated action is taken to tackle climate change. The late timing means it is less effective and more costly to implement. Adverse impacts from climate change leads to poor performance of growth assets.

#### In the long term:

The transition to clean technologies and green regulation begins to boost economic growth. However, physical climate risks remain prominent.

### Summary of the impact to the Scheme/Plan

#### In the short term:

The Scheme initially experiences an increase in funding level.

#### In the medium term:

Around a 10-year mark, the funding level experiences a sharp drop before starting to recover slightly.

#### In the long term:

Despite the slight increase in the funding level, by the end of the modelling period, the funding level lags the Orderly and Base Case transition paths.

Source: Aon. Effective date of the impact assessment is 30 June 2022.

**Please note:** The results of the scenario modelling are illustrative and rely on many assumptions. These are subject to considerable uncertainty.

## Modelling limitations

Scenario modelling relies on many assumptions. They are only illustrative and subject to considerable uncertainty. Please see the [Appendix 3 – Climate scenario modelling assumptions](#) for more detailed information on the assumptions underpinning the scenarios.

The climate scenarios modelling illustrates the potential impact climate change could have on the asset portfolios. It does not consider the impact climate change could have on other risks for our clients, such as timing of member options, operational risks, and covenant risk and longevity risk.

The scenario modelling reflects market conditions and market views at the effective date of the modelling. The model may produce different results for the same strategy under different market conditions.

## Covenant Assessment

We recognise the importance of climate change and the risk it poses to the Scheme. We will endeavour to take climate-related risks into account where feasible when determining the Scheme's investment strategy.

Another key risk identified from the analysis is the volatility of the funding level, with the no transition scenario expected to have the most material impact on the funding level. Deterioration of the funding level will place a strain on the Sponsor covenant and participating employers, if they must make up a bigger shortfall through any future deficit reduction contributions. It may also require the Scheme to re-risk in order to stay on track to achieve the funding target or extend the timeframe for achieving this.

We therefore recognise that climate change may have an impact on the employer covenant. We monitor the covenant on a regular basis, with the support of our covenant adviser and maintain a regular dialogue with the participating employers.



The Directors have undertaken the triennial actuarial valuation as at 5 April 2023. As part of this the Scheme Actuary helped the Directors assess the potential impact of climate change risk on the Scheme's funding assumptions.

Climate-related issues represent a material risk to the future economic stability in the long term, with potentially wide-ranging impacts on ESG matters. Key risks that can affect the Scheme's funding level include a reduction in asset value and members living longer than assumed. These risks are separately addressed by the Scheme Actuary and were also considered in their dedicated advice paper.

# Risk management

We must have processes to identify, assess and manage the climate-related risks that are relevant to the Scheme, and these must be integrated into the overall risk management of the Scheme.

Reporting on our risk management processes provides context for how we think about and address the most significant risks to our efforts to achieve appropriate outcomes for members.



# Our climate risk management framework

We have established a process to identify, assess and manage the climate-related risks that are relevant to the Scheme. This is part of the Scheme's wider risk management and is how we monitor the most significant risks to the Scheme in our efforts to achieve appropriate outcomes for members.

The climate risk management framework is set out in the tables. We delegate a number of key tasks to different committees but retain overall responsibility.

## Governance

Activity	Delegated responsibility	Adviser / supplier support	Frequency of review
Climate change governance framework ( <i>this document</i> )	Directors	Advisers	Annual
Publish TCFD report and implementation statement	Directors	Advisers	Annual
Review adviser objectives to ensure advisers have appropriate climate capability, and bring important, relevant and timely climate-related issues to the Directors' attention.	Directors	Advisers	Annual
Engage with the investment managers to understand how climate risks are considered in their investment approach, and stewardship activities are being undertaken appropriately	Directors	Fund managers, Investment adviser	Annual
Ensure investment proposals explicitly consider the impact of climate risks and opportunities, and seek investment opportunities	IFC	Investment adviser	Ongoing
Ensure that actuarial and covenant advice adequately incorporate climate-related risk factors where they are relevant and material	Directors	Scheme Actuary, Covenant adviser	Triennial

### Directors update

We monitored the above activities as part of our climate related risks and opportunities management. During the year we published our TCFD report and Engagement Policy Implementation Statement.

## Strategy

Activity	Delegated responsibility	Adviser / supplier support	Frequency of review
Identify climate-related risks and opportunities (over agreed time periods) for investment & funding strategy and assess their likelihood and impact.	IFC	Advisers	Annual
Climate scenario analysis - annual review for the continuing suitability of the results	IFC	Investment adviser	Annual

### Directors update

We have spent dedicated time during the year to analyse climate-related risks and opportunities for the Scheme's various asset classes with the support of IFC and our investment adviser. Part of this has been to undertake the qualitative assessment of climate related risks and opportunities, which can be found in the Strategy section of this report. IFC and our investment adviser, have liaised with our investment managers, querying data as appropriate. We undertook an annual review of the climate change scenario analysis - this concluded last years' analysis remained appropriate. Details can be found within the Strategy section.

## Risk management

Activity	Delegated responsibility	Adviser / supplier support	Frequency of review
Seek to understand the climate-related risks to the employer over the short, medium, and long term.	Directors	Covenant adviser	Annual
Consider the prioritisation of those climate-related risks, and the management of the most significant in terms of potential loss and likelihood.	IFC	Advisers	Annual
Include consideration of climate-related risks in the Scheme's other risk processes and documents, such as the risk register and the SIP, and regularly review these	IFC	Advisers	Ongoing

### Directors update

We have processes in place for identifying and assessing climate related risks. Climate risks management is integrated into the ongoing risk management activities of the Scheme via this climate risk management plan.

We carry out qualitative assessment of climate risks and quantitative climate scenario analysis, which combined help us to focus on the risks that pose the most significant impact.



## Metrics and Targets

Activity	Delegated responsibility	Adviser / supplier support	Frequency of review
Obtain emissions data and calculate climate metrics	IFC	Investment adviser, Fund managers	Annual
Review the climate metrics remain suitable	IFC	Investment adviser	Annual
Review the target remains suitable	IFC	Investment adviser	Annual

### Directors update

We, supported by IFC and our investment adviser, collect metrics data on an annual basis, to understand the current state of the portfolio regarding its emissions, data coverage and portfolio alignment. This data is evaluated to produce a climate-related target, in this instance we elected to improve the data coverage for the Scheme. In addition, we have reviewed our target, and considered updating it. Further detail can be found in the metrics and targets section.

## Assessing our managers

To assess our investment managers' abilities to manage climate-related risks, we asked them questions designed by the Pensions Climate Risk Industry Group to help trustees do just that. The questions cover a range of topics including the manager's approach to climate management, Net Zero target setting, whether they produce their own TCFD report, their ability to conduct climate scenario analysis, their engagement policies, and their ability to provide GHG emissions data.

The table below summarises the responses from the investment managers detailing the types of initiatives they are signed up to and analysis that they conduct related to climate change reporting. Some managers were excluded on the basis of materiality.

Manager	TCFD report	Climate-related risks analysis	Industry initiatives	Carbon reporting	Temperature alignment
CBRE	✓	✓	✓	✓	✓
Insight	✓	✓	✓	✓	✓
DTZ	✓	✓	✓	✓	✓
KKR	✓	✓	✓	✓	✓
LGIM	✓	✓	✓	✓	✓
PIMCO	✓	✓	✓	✓	-

Source: Managers.

All the managers support reporting in line with TCFD and participate in industry initiatives such as the Net Zero Asset Manager Initiative, Climate

Action 100+, Institutional Investors Group on Climate Change, United Nations Principles for Responsible Investment (“UN PRI”) and Science Based Targets Initiative (“SBTI”).

All the managers carry out (or are working towards carrying out) climate-related scenario analysis and incorporate ESG considerations into their investment processes.

Five managers have set a temperature alignment target, this has increased from last year where only four managers had set a target.

PIMCO does not have specific sustainability targets in place, however the manager has built tools to be able to look the global temperature rise associated with the GHG emissions of a single entity, as well as factors such as issuers’ science-based targets, or carbon emission data. In addition, PIMCO has developed a proprietary Paris Alignment field that leverages numerous third party sources to assist in tracking the trajectory and commitment from individual issuers on their decarbonisation objectives. It also shows whether issuers’ current and future carbon emissions are consistent with the Paris Agreement (the global accord to limit the global temperature rise by year 2100 to 1.5°C – 2°C above pre-industrial levels), notably based on their targets.

We are not taking any immediate action in line with these conclusions. We will continue to monitor managers on the issues of climate change.

# Metrics & Targets

Metrics help to inform our understanding and monitoring of the Scheme's climate-related risks. Quantitative measures of the Scheme's climate-related risks, in the form of both greenhouse gas emissions and non-emissions-based metrics, help us to identify, manage and track the Scheme's exposure to the financial risks and opportunities climate change will bring.



# Our climate-related metrics

We use some quantitative measures to help us understand and monitor the Scheme's exposure to climate-related risks.

Measuring the greenhouse gas emissions related to our assets is a key way for us to assess our exposure to climate change.

Greenhouse gases are produced by burning fossil fuels, meat and dairy farming, and some industrial processes. When greenhouse gases are released into the atmosphere, they trap heat in the atmosphere causing global warming, contributing to climate change.

Greenhouse gases are categorised into three types or 'scopes' by the Greenhouse Gas Protocol, the world's most used greenhouse gas accounting standard.



## Scope 1

All direct emissions from the activities of an organisation which are under their control; these typically include emissions from their own buildings, facilities and vehicles



## Scope 2

These are the indirect emissions from the generation of electricity purchased and used by an organisation



## Scope 3

All other indirect emissions linked to the wider supply chain and activities of the organisation from outside its own operations – from the goods it purchases to the disposal of the products it sells

Scope 3 emissions are often the largest proportion of an organisation's emissions, but they are also the hardest to measure. The complexity and global nature of an organisation's value chain make it hard to collect accurate data.

For more explanation about GHG emissions, please see [Appendix 5 – Greenhouse gas emissions in more detail](#).

## Our climate-related metrics – in detail

In our first year of TCFD reporting, we decided what metrics to report on annually; these are described below. This year we reviewed the metrics, and we believe they continue to be suitable for us to report against.



### Total Greenhouse Gas emissions

The total greenhouse gas (GHG) emissions associated with the portfolio. It is an absolute measure of carbon output from the Scheme's investments and is measured in tonnes of carbon dioxide equivalent (tCO<sub>2</sub>e).



### Carbon footprint

Carbon footprint is an intensity measure of emissions that takes the total GHG emissions and weights it to take account of the size of the investment made. It is measured in tonnes of carbon dioxide equivalent per million pounds invested (tCO<sub>2</sub>e/£m).



### Data Coverage

A measure of the proportion of the portfolio that there is high quality data for (i.e. data which is based on verified, reported, or reasonably estimated emissions, versus that which is unavailable).



### Implied temperature rise

An estimate of the potential global temperature rise over the rest of the century based on the pledges, commitments and business strategy changes of the underlying companies and issuers. It is expressed as a temperature rise in degrees Celsius.

This metric gives the alignment of the Scheme's assets with the climate change goal of limiting the increase in the global average temperature to 1.5°C above pre-industrial levels.



In the table below are the climate-related metrics for the Scheme's assets. You will note that we have not aggregated metrics across the whole portfolio because the methodologies used for some asset classes are significantly different and therefore it is not appropriate to combine them.

Asset class	%	Year	Scopes 1 & 2			Scope 3		
			Data Coverage (%)	Total GHG emissions (tCO <sub>2</sub> e)	Carbon footprint (tCO <sub>2</sub> e/£m)	Data Coverage (%)	Total GHG emissions (tCO <sub>2</sub> e)	Carbon footprint (tCO <sub>2</sub> e/£m)
Equities	3.8%	2024	99.5%	3,889	78.8	98.2%	46,965	964
	3.1%	2023	97.5%	4,525	105.7	n/a	-	-
Property	6.1%	2024	100.0%	57	0.7	70.0%	565	10.6
	5.9%	2023	100%	532	6.3 <sup>1</sup>	100%	1,113	13.2 <sup>1</sup>
Infrastructure	4.6%	2024	95.0%	23,823	421.6	n/a	-	-
	4.1%	2023	92.6%	44,714	813.0	n/a	-	-
Credit	17.4%	2024	49.4%	7,654	69.9	13.9%	12,789	416.0
	15.3%	2023	48.6%	12,053	112.8	n/a	-	-
Inflation Protecting Illiquids	4.7%	2024	n/a <sup>2</sup>	-	-	99.0%	813	13.6
	4.3%	2023	n/a	-	-	60.7%	524	14.0
Buy-in	27.0%	2024	100%	19,653	57.0	n/a	-	-
	32.2%	2023	100%	32,752	71.0	n/a	-	-
LDI <sup>4</sup>	34.5%	2024	100.0%	64,792 Physical 52,652 Synthetic	141.2	n/a <sup>3</sup>	-	-
	33.3%	2023	100.0%	44,625	81.9	n/a	-	-

Source: Investment managers / Aon.

Data is at 30 June 2024, excluding Property, Infrastructure, Inflation Protecting Illiquid, and Buy-in where data was provided as at 31 December 2023. Cash has been excluded from the analysis on the basis of materiality.

<sup>1</sup>2023 carbon footprint for Property was calculated as tCO<sub>2</sub>e/m<sup>2</sup>

<sup>2</sup>For Inflation Protecting Illiquid assets all GHG emissions are Scope 3 (tenant sourced), there are no scope 1 and 2 emissions in this mandate.

<sup>3</sup>Scope 3 emissions are not applicable to LDI.

<sup>4</sup>2024 emissions associated with LDI has been calculated from the following sources:

- Physical-synthetic split as at 30 June 2024 from the manager.
- U.K. national emissions as at 31 December 2023 from the Emissions Database for Global Atmospheric Research.
- PPP-adjusted GDP as at 31 December 2023 from the Organisation for Economic Cooperation and Development.

For the LDI assets, carbon metrics are shown in relation to the Scheme's physical and synthetic gilt holdings. To see how LDI carbon metrics have been calculated, please find further information below and in Appendix 5 Additional information on metrics calculations.

## Commentary

- Overall, there has been an improvement in data coverage across the majority of asset classes within the Scheme's portfolio.
- This year the Scheme's equity manager was able to provide scope 3 carbon emissions data. The total scopes 1 and 2 carbon emissions for equities fell from last year despite an increase in asset allocation and data coverage, this is primarily driven by a decrease in the carbon footprint.

- This year's carbon metrics figures for property are not directly comparable to last year as a different carbon intensity measure was used. The manager was able to share the carbon footprint (tCO<sub>2</sub>e/£m) this year, whereas last year only the carbon intensity figure through gross floor area (tCO<sub>2</sub>e/m<sup>2</sup>) was available.
- Similarly to equities, the scope 1 and 2 carbon emissions for infrastructure and credit have decreased despite an increase in asset allocation and data coverage, due to a significant fall in the carbon footprint.
- Scope 3 data coverage for inflation protecting illiquids has improved significantly leading to an increase in the total emissions.
- Over the year, there has been a decrease in total carbon emissions due to a fall in the carbon footprint and a decrease in the asset allocation.

### LDI methodology

The total emissions associated with the LDI assets have increase substantial since last year. This is because the methodology for calculating the carbon footprint of LDI has evolved. It involves the use of Purchasing Power Parity Adjusted Gross Domestic Product of the host country (PPP-adjusted GDP) to calculate the carbon footprint associated with sovereign bonds. This is the approach we used to calculate carbon emission data for LDI this year, whereas last year we relied on the data provided by the manager. Given the difference in methodologies, the figures are not directly comparable.

The rationale for splitting 'physical' and 'synthetic' emissions is to distinguish between the sovereign bonds physically held by the Scheme i.e. 'physical emissions', and certain synthetic asset exposures obtained using derivatives.

Scope 3 is currently not applicable to LDI, as it contains primarily UK sovereign bonds and Scope 3 emissions are not yet widely available for UK sovereign bonds.

### Implied Temperature Rise

Asset class	Asset allocation	Year	ITR (°C)
Equities	3.8%	2024	2.5 – 2.6
	3.1%	2023	2.8 – 2.9
Credit	17.4%	2024	2.7
	15.3%	2023	2.4
Buy-in	27.0%	2024	2.5
	32.2%	2023	2.7

Source: Investment managers / Aon. Data as at 30 June 2024 unless specified otherwise. Data for buy-in is as at 31 December 2023.

### Commentary

Overall, the Scheme's Implied Temperature Rise has improved for both the equities and buy-in assets.

We have excluded Property, Infrastructure, and Inflation Protecting Illiquid from the analysis, because due to the nature of the underlying assets this metric is not applicable.

This year the Scheme's credit managers were able to provide a weighted average temperature score. Previously the managers were not able to provide an aggregated figure of Implied Temperature Rise Metric. An aggregated weighted average ITR was calculated by Aon previously.

## Notes on the data

In general, we relied on information provided by the Scheme's investment managers about their greenhouse gas emissions. Our adviser, Aon aggregated this information to calculate the metrics for the Scheme's portfolio of assets.

The exception to this is the metrics for the LDI; see [Appendix 5 – Additional information on metrics calculations](#) for more information.

### Availability of data:

- 3 managers provided scopes 1, 2 and 3 GHG emissions.
- 3 managers provided scopes 1 and 2 only.
- 2 managers provided portfolio alignment data.
- 2 managers were excluded on material grounds.

Aon did not make estimates for missing data.

Due to some data not being available we expect the reported emissions metrics do not include all the Scheme's GHG emissions. And so, the metrics show the Scheme's GHG emissions to be lower than they really are.

We expect that in the future better information will be available from managers and this improvement will be reflected in the coming years' reporting.

### The Carbon Emissions Template

Our investment adviser, Aon, collected the carbon emissions data from our managers on our behalf using the industry standard Carbon Emissions Template ("CET"). The CET was developed by a joint industry initiative of the Pension and Life Savings Association, the Association of British Insurers and Investment Association Working Group. The CET seeks to provides a standardised set of data to help pension schemes meet their climate reporting obligations.

# Looking to the future

## Our climate-related target

Climate-related targets help us track our efforts to manage the Scheme's climate change risk exposure.

Without meaningful data from the investment managers, it is hard to measure our climate-risk exposure. So, it is important to set a target to improve the data coverage of the GHG emissions data from the managers. In our first year of reporting (2023), we set a target to improve data coverage to 75% for the credit portfolio and to 90% for the overall portfolio. The table below shows the evolution of the data coverage for our corresponding targets for scopes 1 and 2 emissions. Scope 3 emissions are more difficult to measure accurately, hence we will continue monitoring and engaging with the managers on the developments in this space.

The Scheme's performance against the target is measured and reported on every year. Over time, this will show the Scheme's progress against the target.

### Our progress towards the target

Since last year, data coverage for the Scheme's credit portfolio has improved by 0.8% to 49.4%. The overall portfolio data coverage has also improved by 0.6% to 86.2%.

Asset class	Target by 2025	Actual data coverage		
		2022	2023	2024
Credit Portfolio	75%	30.0%	48.6%	49.4%
Overall Portfolio	90%	81.1%	85.6%	86.2%

*Note: Based on scopes 1 and 2 emissions. LDI and Annuities data coverage has been included in the overall portfolio percentage for illustrative purposes only. This is because typically, LDI and annuities are not comparable with the other asset classes within the portfolio so is excluded. Total data coverage excl. annuities and LDI is 62.4%.*

### Review of target

We acknowledge the general improvement in data coverage for the credit assets and at the overall portfolio level. Whilst we are close to the overall portfolio target of 90% data coverage, the data coverage for credit lags behind. The PIMCO Diversified Income mandate within the credit portfolio has 77% data coverage for 2024, above the 75% target. However, the challenge of obtaining meaningful data for asset backed securities ("ABS") which is less straightforward than more traditional credit instruments, such as corporate bonds, is reducing the overall data coverage of the credit portfolio .

We engaged with our ABS manager, Insight, who explained that it has started working with external data vendors to improve data coverage. The manager believes that it remains difficult to get meaningful data however, it will continue

liaising with the vendors to improve their approach, coverage and methodology.

Given the progress to date and ongoing challenge with data for the ABS fund we have decided to extend the timeframe for achieving our targets to 2028.

### Steps we are taking to reach the target

To improve data coverage, we will continue to engage with the Scheme's investment managers to improve the availability and reporting of emissions data for each asset class in which the Scheme is invested. Through ongoing pressure from asset owners collectively and new regulatory requirements for asset managers, we expect data coverage to improve over time and will engage further with the managers if progress does not meet our expectations.



# Appendices

Please see the appendices for additional information about our climate disclosures report.



# Appendix 1 - Glossary

<b>Governance</b>	refers to the system by which an organisation is directed and controlled in the interests of shareholders and other stakeholders. <sup>2</sup> Governance involves a set of relationships between an organisation's management, its board, its shareholders, and other stakeholders. Governance provides the structure and processes through which the objectives of the organisation are set, progress against performance is monitored, and results are evaluated. <sup>3</sup>
<b>Strategy</b>	refers to an organisation's desired future state. An organisation's strategy establishes a foundation against which it can monitor and measure its progress in reaching that desired state. Strategy formulation generally involves establishing the purpose and scope of the organisation's activities and the nature of its businesses, taking into account the risks and opportunities it faces and the environment in which it operates. <sup>4</sup>
<b>Risk management</b>	refers to a set of processes that are carried out by an organisation's board and management to support the achievement of the organisation's objectives by addressing its risks and managing the combined potential impact of those risks. <sup>5</sup>
<b>Climate-related risk</b>	refers to the potential negative impacts of climate change on an organisation. Physical risks emanating from climate change can be event-driven (acute) such as increased severity of extreme weather events (e.g., cyclones, droughts, floods, and fires). They can also relate to longer-term shifts (chronic) in precipitation and temperature and increased variability in weather patterns (e.g., sea level rise). Climate-related risks can also be associated with the transition to a lower-carbon global economy, the most common of which relate to policy and legal actions, technology changes, market responses, and reputational considerations. <sup>6</sup>
<b>Climate-related opportunity</b>	refers to the potential positive impacts related to climate change on an organisation. Efforts to mitigate and adapt to climate change can produce opportunities for organisations, such as through resource efficiency and cost savings, the adoption and utilization of low-emission energy sources, the development of new products and services, and building resilience along the supply chain. Climate-related opportunities will vary depending on the region, market, and industry in which an organisation operates. <sup>7</sup>
<b>Value chain</b>	refers to the upstream and downstream life cycle of a product, process, or service, including material sourcing, production, consumption, and disposal/recycling. Upstream activities include operations that relate to the initial stages of producing a good or service (e.g., material sourcing, material processing, supplier activities). Downstream activities include operations that relate to processing the materials into a finished product and delivering it to the end user (e.g., transportation, distribution, and consumption). <sup>8</sup>
<b>Net zero</b>	means achieving a balance between the greenhouse gases emitted into the atmosphere, and those removed from it. This balance – or net zero – will happen when the amount of greenhouse gases add to the atmosphere is no more than the amount removed. <sup>9</sup>

<sup>2</sup> A. Cadbury, Report of the Committee on the Financial Aspects of Corporate Governance, London, 1992.

<sup>3</sup> OECD, G20/OECD Principles of Corporate Governance, OECD Publishing, Paris, 2015.

<sup>4</sup> TCFD, Recommendations of the Task Force on Climate-related Financial Disclosures, 2017

<sup>5</sup> TCFD, Recommendations of the Task Force on Climate-related Financial Disclosures, 2017

<sup>6</sup> TCFD, Recommendations of the Task Force on Climate-related Financial Disclosures, 2017

<sup>7</sup> TCFD, Recommendations of the Task Force on Climate-related Financial Disclosures, 2017

<sup>8</sup> TCFD, Recommendations of the Task Force on Climate-related Financial Disclosures, 2017

<sup>9</sup> Energy Saving Trust, What is net zero and how can we get there? - Energy Saving Trust, October 2021

## Appendix 2 – An explanation of climate risk categories

Climate-related risks are categorised into physical and transition risks. Below are examples of transition and physical risks.

### Transition risks

Transition risks are those related to the ability of an organisation to adapt to the changes required to reduce greenhouse gas emissions and transition to renewable energy. Within transition risks, there are four key areas: policy and legal, technological innovation, market changes, and reputational risk.

#### Policy and legal

##### Examples

Increased pricing of GHG emissions  
Enhanced emissions-reporting obligations  
Regulation of existing products and services

##### Potential financial impacts

Increased operating costs (e.g. higher compliance costs, increased insurance premiums)  
Write-offs, asset impairment and early retirement of existing assets due to policy changes

#### Technology

##### Examples

Cost to transition to lower emissions technology  
Unsuccessful investments in new technologies

##### Potential financial impacts

Write-offs and early retirement of existing assets  
Capital investments in technology development  
Costs to adopt new practices and processes

#### Market

##### Examples

Changing customer behaviour  
Uncertainty in market signals  
Increased cost of raw materials

##### Potential financial impacts

Reduced demand for goods and services due to shift in consumer preferences.  
Abrupt and unexpected increases in energy costs.  
Re-pricing of assets (e.g., fossil fuel reserves, land valuations, securities valuations).

#### Reputational

##### Examples

Stigmatisation of sector  
Increased stakeholder concern or negative stakeholder feedback

##### Potential financial impacts

Reduced revenue from decreased demand for goods and services.  
Reduced revenue from decreased production capacity

### Physical Risks

Physical risks refer to the physical impacts of climate change on a firm's operations. They directly impact a firm's ability to perform its function due to climate disruption. They fall into two subcategories: acute and chronic. Acute risks are extreme climate events, and chronic risks are trends that appear over time.

#### Acute

##### Examples

Extreme heat  
Extreme rainfall  
Floods  
Droughts

#### Chronic

##### Examples

Water stress  
Sea level rises  
Land degradation  
Variability in temperature

## Appendix 3 – Climate scenario modelling assumptions

The climate scenarios were developed by Aon and are based on detailed assumptions. They are only illustrative and are subject to considerable uncertainty. They consider the exposure of the Scheme to climate-related risks and the approximate impact on asset/liability values over the long-term.

The purpose of the model is to consider the long-term exposure of the Scheme to climate-related risks and the pattern of asset returns over the long term.

In particular, the model considers different climate change scenarios and the approximate impact on asset/liability values over the long-term. Our model assumes a deterministic projection of assets and TP liabilities, using standard actuarial techniques to discount and project expected cashflows.

- It models the full yield curve as this allows for an accurate treatment of the liabilities and realistic modelling of the future distribution of interest rates and inflation. It also allows us to truly assess the sensitivities of the assets and liabilities to changes in interest and inflation rates.
- The parameters in the model vary deterministically with the different scenarios.
- Note no allowance is made for expenses, with modelled asset/liability cashflows left unaffected by these factors.

The liability update and projections are considered appropriate for the analysis. However, they are approximate, and a full actuarial valuation carried out at the same date may produce a materially different result. The liability update and projections are not formal actuarial advice and do not contain all the information you need to make a decision on the contributions payable or investment strategy.

The model intends to illustrate the climate-related risks the Scheme is currently exposed to, highlighting

areas where risk mitigation could be achieved through changing the portfolio allocation.

Other relevant issues such as governance, costs and implementation

(including manager selection and due diligence) must be considered when making changes to the investment strategy.

Investment risk is only captured in the deviance from the Base Case, but this is not the only risk that the Scheme faces; other risks include covenant risk, longevity risk, timing of member options, basis risks and operational risks.

The model has been set up to capture recent market conditions and views; the model may propose different solutions for the same strategy under different market conditions.

### Data used

The model projects using the following inputs as at 30 June 2022 (as provided by Willis Tower Watson in their email dated 22 July 2022):

- Market value of assets: £1,342.8M
- Present value of liabilities on the Technical Provisions basis: £1,379.0M
- Benefit outgo in year 1: £25.3M
- Duration of the TP liabilities: 20.6 years
- Contributions: Nil in line with the Scheme's Schedule of Contributions dated 23 April 2021

## Appendix 4 – Detailed Breakdown of metrics

Asset class	%	Year	Scopes 1 & 2		Carbon footprint (tCO <sub>2</sub> e/£m)	Scope 3		Carbon footprint (tCO <sub>2</sub> e/£m)
			Data Coverage (%)	Total GHG emissions (tCO <sub>2</sub> e)		Data Coverage (%)	Total GHG emissions (tCO <sub>2</sub> e)	
<b>Equities</b>	<b>3.8%</b>	<b>2024</b>	<b>99.5%</b>	<b>3,889</b>	<b>78.8</b>	<b>98.2%</b>	<b>46,965</b>	<b>964</b>
	3.1%	2023	97.5%	4,525	105.7	n/a	-	-
LGIM MSCI World Minimum Volatility	1.9%	2024	99.7%	712	28.8	99.1%	11,136	453.1
		2023	99.8%	1,764	83.0	n/a	-	-
LGIM FTSE RAFI 1000	1.9%	2024	99.2%	2,664	108.3	97.3%	35,829	1,243.6
		2023	99.7%	2,761	128.2	n/a	-	-
<b>Property – DTZ</b>	<b>6.1%</b>	<b>2024</b>	<b>100.0%</b>	<b>57</b>	<b>0.7</b>	<b>70.0%</b>	<b>565</b>	<b>10.6</b>
	5.9%	2023	100%	532	6.3 <sup>1</sup>	100%	1,113	13.2 <sup>1</sup>
<b>Infrastructure - KKR</b>	<b>4.6%</b>	<b>2024</b>	<b>95.0%</b>	<b>23,823</b>	<b>421.6</b>	<b>n/a</b>	<b>-</b>	<b>-</b>
	4.1%	2023	92.6%	44,714	813.0	n/a	-	-
<b>Credit</b>	<b>17.4%</b>	<b>2024</b>	<b>49.4%</b>	<b>7,654</b>	<b>69.9</b>	<b>13.9%</b>	<b>12,789</b>	<b>416.0</b>
	15.3%	2023	48.6%	12,053	112.8	n/a	-	-
Insight - Asset Backed Securities	8.6%	2024	21.0%	78	3.4	n/a	-	-
		2023	15.0%	35	2.1	n/a	-	-
PIMCO Diversified Income	8.8%	2024	76.6%	7,577	87.4	27.2%	12,789	416.0
		2023	82.1%	12,018	133.0	n/a	-	-
<b>Inflation Protecting Illiquids - CBRE</b>	<b>4.7%</b>	<b>2024</b>	<b>n/a<sup>3</sup></b>	<b>-</b>	<b>-</b>	<b>99.0%</b>	<b>813</b>	<b>13.6</b>
	4.3%	2023	n/a	-	-	60.7%	524	14.0
<b>Buy-in</b>	<b>27.0%</b>	<b>2024</b>	<b>100.0%</b>	<b>19,653</b>	<b>57.0</b>	<b>n/a</b>	<b>-</b>	<b>-</b>
	32.2%	2023	100.0%	32,752	71.0	n/a	-	-
<b>LDI<sup>5</sup></b>	<b>34.5%</b>	<b>2024</b>	<b>100.0%</b>	<b>64,792</b>	<b>141.2</b>	<b>n/a<sup>4</sup></b>	<b>-</b>	<b>-</b>
				Physical <b>52,652</b>				
	33.3%	2023	100.0%	44,625	81.9	n/a	-	-

Source: Investment managers / Aon.

Data is at 30 June 2024, excluding Property, Infrastructure, Inflation Protecting Illiquid, and Buy-in where data was provided as at 31 December 2023. Cash has been excluded from the analysis on the basis of materiality.

<sup>1</sup>2023 carbon footprint for Property was calculated as tCO<sub>2</sub>e/m<sup>2</sup>

<sup>3</sup>For Inflation Protecting Illiquid assets all GHG emissions are Scope 3 (tenant sourced), there are no scope 1 and 2 emissions in this mandate.

<sup>4</sup>Scope 3 emissions are not applicable to LDI.

<sup>5</sup>2024 emissions associated with LDI has been calculated from the following sources:

- Physical-synthetic split as at 30/06/2024 from the manager.
- U.K. national emissions as at 31 December 2023 from the Emissions Database for Global Atmospheric Research. The 2023 figure is currently unavailable.
- PPP-adjusted GDP as at 31 December 2023 from the Organisation for Economic Cooperation and Development. The 2023 figure is currently unavailable.



*For the LDI assets, carbon metrics are shown solely in relation to the Scheme's physical and repurchase (repo) gilt holdings. Please find further information below and in Appendix 5 Additional information on metrics calculations, to see how LDI has been calculated.*

## Appendix 5 – Additional information on metrics calculations

Where possible we use the industry standard methodologies for calculating metrics. There currently is no industry-wide standard for calculating metrics for some assets, and different managers may use different methods and assumptions.

These issues are common across the industry and highlight the importance of climate reporting to improve transparency. We expect that in the future better information will be available from managers as the industry aligns to expectations and best practice standards.

### The carbon metrics for non-LDI asset classes

Emissions data was collected from the managers using the CET<sup>10</sup>. Managers provided carbon footprint and data coverage for their fund(s).

Aon calculated the total GHG emissions for each fund as follows:

*carbon footprint x £m Scheme assets invested in the fund x data coverage.*

Where necessary Aon aggregated the carbon metrics for each asset class. The methodology used for aggregating did not make any assumptions about the carbon emissions for assets for which data was unavailable. The aggregation methodology is as set out below:

$$\text{carbon footprint for the asset class} = \frac{\sum G_i}{\sum (A_i \times C_i)}$$

Where  $i$  is each fund in the asset class

$G_i$  = Total GHG for fund  $i$  (tCO<sub>2</sub>e)

$A_i$  = Assets invested in fund  $i$  (£M)

$C_i$  = Data Coverage of fund  $i$  (%)

### The carbon metrics for LDI

Emissions associated with LDI includes both physical emissions (emissions associated with physical assets that are held within the portfolio) and synthetic emissions (emissions associated with the notional exposure to government bonds gained through derivatives). The Scheme's LDI manager(s) provided the value of the physical and synthetic government bond exposures.

The carbon footprint was calculated by Aon as follows:

<sup>10</sup> <https://www.plsa.co.uk/Policy-and-Research/Document-library/Carbon-Emissions-Template>

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*UK national emissions scopes 1 and 2*  
*PPP-adjusted GDP*

Where UK national emissions scopes 1 and 2 as at 31 December 2023 as reported by the Emissions Database for Global Atmospheric Research; and PPP (Purchasing Power Parity)-adjusted GDP as at 31 December 2023 as reported by the Organization for Economic Cooperation and Development.

Total GHG emissions for LDI was estimated for physical and synthetic exposures as follows:

*£m of Scheme's physical exposure x carbon footprint x data coverage*

*£m of Scheme's synthetic exposure x carbon footprint x data coverage*

Where data coverage is assumed to be 100% estimated.

### **Implied temperature rise**

Aon requested the implied temperature rise of each fund from the investment managers and aggregated the results based on the portion of assets invested in each fund.

Guidance from the Department of Work and Pensions<sup>11</sup> states that the trustee should not aggregate the ITR unless the same methodology has been used across the Scheme's investments. We have relied on the individual manager data; hence the consistency of methodology cannot be guaranteed.

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<sup>11</sup> Statutory guidance: Governance and reporting of climate change risk: guidance for trustees of occupational schemes - GOV.UK ([www.gov.uk](http://www.gov.uk))

## Appendix 6 – Greenhouse gas emissions in more detail

Greenhouse gases in the atmosphere keep the Earth's surface and atmosphere warm because they absorb sunlight and re-emit it as heat in all directions including back down to Earth. Adding more greenhouse gases to the atmosphere makes it even more effective at preventing heat from leaving the Earth's atmosphere.

Greenhouse gases are vital because they act like a blanket around the Earth making it the climate habitable. The problem is that human activity is making the blanket "thicker". For example, when we burn coal, oil, and natural gas we send huge amounts of carbon dioxide into the air. When we destroy forests, the carbon stored in the trees escapes to the atmosphere. Other activities, such as raising cattle and planting rice emit methane, nitrous oxide and other greenhouse gases.

The amount of greenhouse gases in the atmosphere has significantly increased since the Industrial Revolution. The Kyoto Protocol<sup>12</sup> identifies six greenhouse gases which human activity is largely responsible for emitting. Of these six gases, human-made carbon dioxide is the biggest contributor to global warming.

Each greenhouse gas has a different global warming potential and persists for a different length of time in the atmosphere. So, emissions are expressed as a carbon dioxide equivalent (CO<sub>2</sub>e). This enables the different gases to be compared on a like-for-like bases, relative to one unit of carbon dioxide.

Six main greenhouse gases identified by the Kyoto Protocol

CO<sub>2</sub>

Carbon dioxide

CH<sub>4</sub>

Methane

N<sub>2</sub>O

Nitrous oxide

HFCs

Hydrofluorocarbons

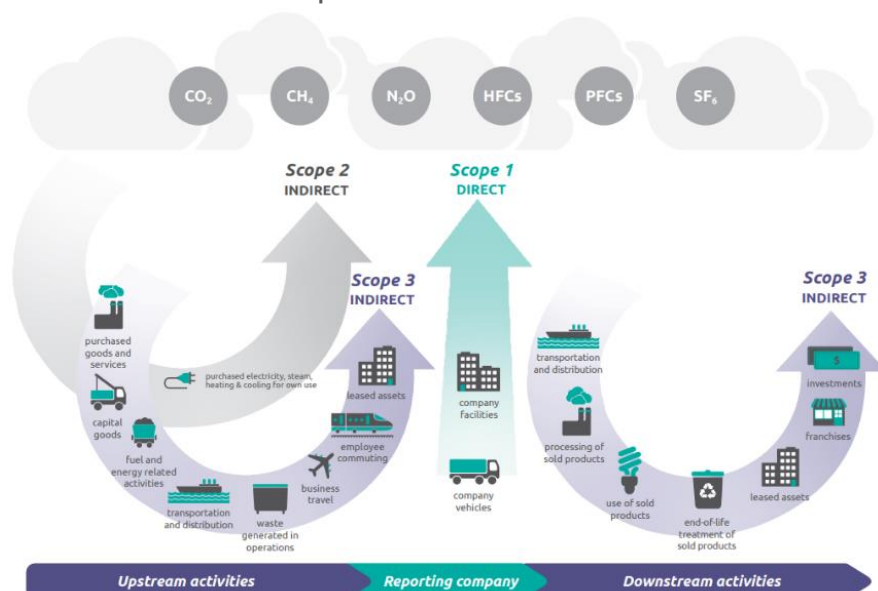
PFCs

Perfluorocarbons

SF<sub>6</sub>

Sulphur hexafluoride

Overview of GHG Protocol scopes and emissions across the value chain



Source: Greenhouse Gas Protocol, Corporate value chain (scope 3) Accounting and Reporting Standard

<sup>12</sup> [https://unfccc.int/kyoto\\_protocol](https://unfccc.int/kyoto_protocol)