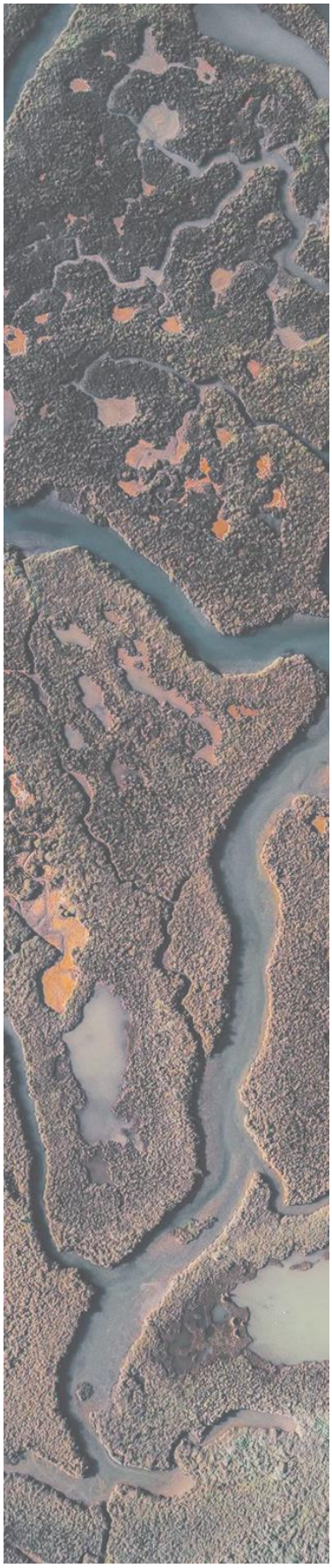
# Climate disclosures for year ended 30 September 2024

Produced by: The Trustee of the Unite Pension Scheme (the “Trustee”)

Date: 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 30 September 2024. This report has been prepared by the Trustee 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:

| | |
|---|---|
| **Governance:** | The Scheme's governance around climate-related risks and opportunities. |
| **Strategy:** | The potential impacts of climate-related risks and opportunities on the Scheme's strategy and financial planning. |
| **Risk Management:** | The processes used to identify, assess and manage climate-related risks. |
| **Metrics and Targets:** | 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 Trustee, have taken to understand the potential impact climate change could have on the Scheme.

We have worked closely with our investment consultant 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 is a Defined Benefit ("DB") Scheme. The Scheme's investment portfolio is diversified across a range of different asset classes including equities, illiquids and bonds.

We have been supported by our investment consultant, Aon Investments Limited ("Aon") with the production of our TCFD disclosures report and also the data contained within it.

## Strategy

We have undertaken qualitative and quantitative analyses to better understand the climate related risks and opportunities of the different asset classes in which the Scheme invests. From the qualitative analysis it became apparent to us there was a general expectation that the impact of both physical and transition risks will increase over time. However, the quantitative climate scenario analysis suggests that the Scheme's investment strategy exhibits reasonable resilience under the modelled climate scenarios. This is primarily due to the high level of diversification of the Scheme's assets and the inflation and interest rate protection in place. Alongside this, climate change provided numerous investment opportunities for the different asset classes. Further detail can be found in the Strategy Pillar of this report on pages 9–16.

## Risk Management

We have integrated climate related risks into our various documents and processes. For example, we consider climate related risk by seeking advice from our investment consultant when setting the investment strategy and monitoring manager performance, as outlined in our Statement of Investment Principles.

We have outlined a Risk Management framework, on pages 17-20, which assists with the ongoing management of climate related risks and opportunities. Alongside this, we undertake periodic training on responsible investment to understand how ESG factors, including climate change, may impact the Scheme's assets and liabilities.

## Metrics and Targets

**Metrics**

In this report we disclose information on four climate-related metrics:

- Total greenhouse gas ("GHG") emissions
- Carbon footprint
- Data coverage
- Portion of the portfolio that is SBTi aligned

Overall, the quality of carbon data has improved since last year, particularly for the bond assets. Total GHG emissions and carbon footprint for the Scheme's investments have generally decreased compared to the previous year. This is due to less carbon intensity associated with the underlying securities as well as disinvestments from funds that occurred over the past year.

**Targets**

The targets we set were to a) increase the Scheme's carbon data quality and b) decrease its carbon footprint by 2024.

This year we reviewed the targets and we decided to update our target as follows:

90% data quality by 2030 for scopes 1 and 2, and scope 3 emissions for the asset portfolio excluding LDI.

We will continue monitoring the carbon footprint of the Scheme's assets.

Further information can be found in the Metrics and Targets section of this report on pages 21–28.

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

Chair's signature

On behalf of the Trustee of the Unite 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 Trustee 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.

# Our Scheme's governance

As the Trustee 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 annually.

## Role of the Trustee Board

Given the importance of ESG considerations and climate-related risks and opportunities, we have not identified one individual to specifically be responsible for our response to climate risks and opportunities. Rather, the Trustee Board has collective responsibility for setting the Scheme's climate change risk framework.

We have discussed and agreed our climate-related beliefs and overarching approach to managing climate change risk. Details are set out in the Statement of Investment Principles and the TCFD governance documents including the Climate Mission Statement.

In summary, 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 seek to integrate assessments of climate change risk into our investment decisions.

- 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 our investment portfolio.

- The most appropriate time horizons for the Scheme are as follows:
    - Short term: 1-3 years
    - Medium term: 4-9 years
    - Long term: 10-20 years

Climate-related risks and opportunities are assessed over the above time horizons. Where appropriate, we consider transition and physical risks separately.

We receive periodic training on climate-related issues to ensure that we have the appropriate degree of knowledge and understanding on these issues to support good decision-making. We expect our advisors to bring important and relevant climate-related issues and developments to our attention in a timely manner and expect our advisors to have the appropriate level of knowledge on climate-related matters.

We have delegated oversight of the Scheme's climate change risk management framework to the Investment Sub Committee ("ISC") where they relate to investment matters. The ISC is a sub-committee of the Trustee Board and keeps us apprised of material climate-related developments on a regular basis (at least annually). We regularly monitor and review progress against the Scheme's climate change risk management approach.

## Role of the Investment Sub Committee

We have delegated the ongoing monitoring, and day-to-day implementation, of the Scheme's climate change risk management framework to the ISC.

The ISC seeks to ensure that any investment decisions appropriately consider climate-related risks and opportunities within the context of the Scheme's wider risk and return requirements. In addition, these decisions should be consistent with the climate change policy as set out in the Statement of Investment Principles, Climate Mission Statement and TCFD documentation. The ISC incorporates this into manager selection exercises, and as part of the ongoing monitoring of fund managers. The ISC is responsible for the ongoing monitoring and implementation of the Scheme's climate change risk management framework.

The ISC monitors and reviews progress against the Scheme's climate change risk management approach on an annual basis. The ISC keeps us apprised of any material climate related developments through regular (typically quarterly) updates.

The key activities undertaken by the ISC, with the support of our advisors, are:

- ensuring investment proposals consider the impact of climate risks and opportunities.
- seeking investment opportunities which enhance the ESG and climate change focus of the Scheme's portfolio.
- engaging with the Scheme's investment managers to understand how climate 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 undertaken appropriately on the Scheme's behalf.
- ensuring that actuarial and covenant advice adequately incorporate climate-related risk factors where they are relevant and material.

## Trade Union Share Owners

The Union (the Scheme's sponsoring employer) has joined together with a number of other trade union pension funds to form Trade Union Share Owners ("TUSO"). The aim of this group is to collaborate on voting and engagement with companies in order to put trade union values at the heart of our stewardship practices.

TUSO has developed a set of Trade Union Voting and Engagement Guidelines to guide the group's voting and engagement activity. The Trade Union Voting and Engagement Guidelines reflect a trade union perspective on corporate governance.

We contact the Scheme's investment managers and request that the investment managers vote in line with the TUSO views on certain companies.

## How we work with our advisors?

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

**Investment Consultant** – our investment consultant, Aon, provides investment-related strategic and practical support to the ISC and us, as the Trustee, in respect of the management of climate-related risks and opportunities as set out by the recommendations within the TCFD. This includes provision of regular training and updates on climate-related issues, climate change scenario modelling, ESG ratings and advice with respect to mandates and manager selection.

**Scheme Actuary** – the Scheme Actuary, Aaron Love from First Actuarial, will help us assess the potential impact of climate change risk on the Scheme's funding assumptions where appropriate.

**Covenant Advisor** – our covenant advisor, BTG advisory, helps us understand the potential impacts of climate change risk on the sponsor covenant.

### Trustee's update

We review the quality of our adviser's provision of advice and support on climate-related issues annually. For our investment adviser, this is part of the annual review against investment consultant objectives. For our Scheme Actuary this is part of our triennial valuation.

# 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 exposed to. At the time of writing two managers have not been able to provide information for the risk assessment.

## Our investments

The Scheme's investment portfolio is diversified across a range of different asset classes including equities, illiquids and bonds.

| **Asset Class** | Equities | Illiquids | Bonds | LDI | Cash |
|---|---|---|---|---|---|
| **Strategic Allocation** | 27.5% | 6.8% | 33.4% | 31.1% | 1.1% |

Asset allocations as at 30 September 2024. Numbers may not sum due to rounding. Please note that Diversified Growth Funds have been excluded from the strategic allocation as the Scheme is in the process of disinvesting. *Liability Driven Investment (LDI), *Bonds (Absolute Return Bond, ESG funds and Core Plus Bond Fund), *Illiquids (Real Estate Debt, Energy Transition and Global Transition Funds).

## 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 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. We decided the most appropriate time horizons for the Scheme are:

- short term: 1-3 years
- medium term: 4-9 years
- long term: 10-20 years

# Qualitative assessment

## Climate-related risks

### Key conclusions

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

The Scheme's equity manager was unable to provide a risk assessment of its fund. However, the manager stated it invests in companies which are associated with the shift from high to low carbon solutions. The manager also stated they hold short positions in heavy carbon emitting businesses.

Bonds, which form a significant part of the Scheme's assets, are deemed a medium risk in terms of exposure to climate-related risks. The managers recognise that there is likely to be a higher risk in the long-term due to potential supply chain issues for key raw materials and significant damage posed by climate change. However, the managers have also identified significant opportunities in the long-term.

Illiquids have been identified as low to medium risk in relation to physical and transition climate risks. The Scheme's managers in this asset class are targeting opportunities that may come from the transition to a low carbon economy. The managers have identified material risk (amber) in the long-term due to extreme weather events and their impact on supply and wider logistic networks. The managers mitigate these risks by locking in major components concurrently with signing power purchase agreements (PPAs) for projects, and through their relationships with suppliers and global scale of operations.

The managers invest broadly across geographies and clean technologies and allocate funds to carbon-intensive businesses that are transforming to Paris-aligned business models.

As the Trustee, we have taken steps over the year to mitigate climate-related risks, including:

- close monitoring of stewardship activities carried out by our investment managers (to ensure they are appropriately engaging with investee companies on the management of climate risks);
- utilising strategies that target climate opportunities where appropriate (allowing greater scope to select investments whilst accounting for climate-related risks and opportunities); and
- integrating climate considerations into fund reviews and selections, including the appointment of managers with specific sustainability and climate objectives. Some of the Scheme's managers, including LGIM, Pictet and Brookfield, have explicitly stated climate-related objectives.

Please note that a detailed summary of the physical and transition risks on the asset class level is included in *Appendix 3 – Asset class level climate risk assessment*. The mandates' individual assessments are based on ratings and commentary provided by the investment managers.

**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:

| | |
|---|---|
| **Equity** | The Scheme's equity portfolio seeks to benefit from the transition to a low carbon economy. It is targeting opportunities such as investment in businesses providing renewable services and oil and gas companies with decarbonisation strategies in place. |
| **Illiquids** | Across the illiquid portfolio, some of the managers are directly targeting opportunities arising from the transition to a low carbon economy. Opportunities include renewable energy projects and aims to achieve sustainability certification to increase rents. These opportunities are driven by the increased demand for low-carbon products and services due to sustainable initiatives to meet decarbonisation targets. |
| **Bonds** | Whilst not the principal driver or main objective of the diversified income fund, climate risks are considered in decision making. This fund has c.1.6% allocation to green bonds as at 30 September 2024, in line with last year's allocation.<br><br>The Environment, Social and Governance ("ESG") global investment grade credit fund considers climate risks in all its investments. This fund has c.38.4% of green bond holdings as at 30 September 2024 which is an increase of 5.6% from last year.<br><br>The manager of the absolute return bonds fund identified three climate-related opportunities including investing in climate solutions, companies across sectors with leading transition plans and engaging with laggards across sectors which can gain from a robust climate strategy. |

Source: Managers.

# How resilient is the Scheme to climate change?

We carried out climate change scenario analysis to better understand the impact climate change could have on the Scheme's assets and liabilities in the first year of the reporting.

The analysis considers a range of climate change scenarios. Each 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 our investment consultant, Aon, and are based on detailed assumptions. They are only illustrative and are 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.

## Trustee update

We note that the Regulations require that there may be circumstances which require the climate scenario analysis to be re-done. This may be as a result of, but not limited to:

- a material change to the investment and/or funding strategy; or
- the availability of new or improved climate scenarios or modelling capabilities or events that might reasonably be thought to impact the results of the modelling.

The latest analysis is based on assumptions and the Scheme's strategic asset allocation as at 30 June 2021. We reviewed the scenario analysis and we believe the analysis remains appropriate for this year.

# DB Impact on the funding level

## Key conclusions

The impact assessment shows that the Scheme's investment strategy exhibits reasonable resilience under all five climate scenarios. This is due to the high level of diversification across asset classes and relatively high levels of hedging against changes in interest rates and inflation expectations.

Under all scenarios considered, the Scheme is expected to be fully funded in the medium term, however under the Disorderly Transition scenario there is a large loss of surplus relative to the Base Case by the end of the 20-year period.

Under the Orderly Transition scenario, the funding level experiences a fall as risk assets perform poorly initially. The funding level starts to improve in the medium term and catches up with the Base Case, where it continues to grow steadily, as higher growth prospects boost returns longer term.

Despite the resilience of the investment strategy, the funding level is volatile under some of the scenarios. For example, under the Abrupt Transition the Scheme experiences a fall in the funding level, so it takes longer for the Scheme to reach full funding relative to the Base Case. Deterioration of the funding level may place a strain on the sponsor covenant as they may have to make up a bigger shortfall through deficit 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 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.

### 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 five scenarios and have summarised them below.

| | | |
|---|---|---|
| **Base case**<br>Temperature rise +2ºC- 2.4ºC<br>Reach net-zero 2050<br>Fragmented coordination | **Summary of the Scenario**<br>The base case is based on Aon's Capital Market Assumptions which consider what is currently priced into the market. This includes climate change related impact.<br><br>In the base case, action is taken to tackle climate change, but the approach is fragmented. The transition to a low carbon economy is expected to happen in a slow but orderly fashion. | **Summary of the impact to the Scheme**<br>The funding level continue to increase steadily. In the medium term the growth starts to accelerate. The funding level achieves a large surplus by the end of the 20 years. |
| **Disorderly Scenario** | **Summary of the Scenario**<br>**In the short term:**<br>Insufficient consideration is given to long-term policies and there is no action taken to combat climate change. | **Summary of the impact to the Scheme**<br>**In the short term:**<br>The Scheme's funding level increases but is below the Base Case. |

| | | |
|---|---|---|
| Temperature rise +3 ºC-4°C<br>Reach net-zero after 2050<br>Late and aggressive environmental regulation | **In the medium term:**<br>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.<br>**In the long term:**<br>The transition to clean technologies and green regulation begins to boost economic growth. However, physical climate risks remain prominent. | **In the medium term:**<br>The funding level drops significantly followed by a slow recovery in the following years.<br>**In the long term:**<br>The funding level to increase again but it remains below its starting position by the end of the modelling period. This is the worst outcome for the Scheme. |
| **Orderly Scenario**<br>Temperature rise +1.3 ºC-2°C<br>Reach net-zero 2050<br>Coordinated environmental regulation | Summary of the Scenario<br>**In the short term:**<br>Immediate coordinated global action is taken to tackle climate change. Growth assets perform poorly.<br>**In the medium term:**<br>The rapid transition to clean technologies and green regulation begins to boost economic growth.<br>**In the long term:**<br>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. | Summary of the impact to the Scheme<br>**In the short term:**<br>Initially, there is a drop in funding level.<br>**In the medium term:**<br>The funding level continues to increase and catches up with the Base Case scenario.<br>**In the long term:**<br>The funding level stays in line with Base Case and continue to grow steadily. |
| **No Transition Scenario**<br>Temperature rise >+4ºC<br>Reach net-zero After 2050<br>Environmental regulation **None** | Summary of the Scenario<br>**In the short term:**<br>No agreed global action is taken to combat climate change.<br>**In the medium term:**<br>The world economy remains oriented towards improving near-term economic prospects, with companies and governments taking a "Business as usual" approach.<br>**In the long term:**<br>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. | Summary of the impact to the Scheme<br>**In the short term:**<br>The funding level improves in a similar way to the Base Case but then starts to fall behind.<br>**In the medium term:**<br>The funding level barely improves and is at a deficit as growth has tapered off.<br>**In the long term:**<br>The funding level starts to increase sharply but remains significantly below the Base Case resulting in a lower surplus in comparison after 20 years. |
| **Abrupt Scenario**<br>Temperature rise +1.5 ºC-2°C<br>Reach net-zero After 2050<br>Environmental regulation **Late and Aggressive** | Summary of the Scenario<br>**In the short term:**<br>Despite growing public awareness, material action is not undertaken to combat climate change.<br>**In the medium term:**<br>Increasing effects of extreme weather lead to a rapid introduction of policies to tackle climate change. The delayed action leads to higher costs to tackle climate change and risky assets perform poorly as a result. The higher costs are the result for the economy being forced to transition away from fossil fuels.<br>**In the long term:**<br>Following rapid action in the medium term, the longer-term benefits from tackling climate change lead to higher growth. | Summary of the impact to the Scheme<br>**In the short term:**<br>The funding level broadly behaves in line with the Base Case scenario but then faces a sharp decline.<br>**In the medium term:**<br>The funding level starts to recover immediately and achieves a surplus.<br>**In the long term:**<br>The funding level of the Scheme continues to increase and starts to approach the Base Case. |

Source: Aon. Effective date of the impact assessment is 30 June 2021.
**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, 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.

## Considering the impact of climate change on the sponsoring employer

We recognise the importance of climate change and the risk it poses to the Scheme. We take climate-related risks into account in determining our investment strategy, and any forthcoming strategy reviews.

As mentioned previously, deterioration of the Scheme's funding level can place a strain on the sponsor covenant, if the Sponsor must make up the shortfall through contributions. We therefore recognise that climate change may have an impact on the sponsor covenant.

We believe that the views of our Sponsor, Unite, on climate related issues align with our own. Unite believes that it is essential that the government invests in a workers-led transition to net zero.[1]

Unite is a strong advocate for a just transition to a greener economy, where workers' skills and needs are considered whilst decarbonising the economy. Unite has launched an environment taskforce to support its members to be at the forefront of the change to a greener economy.[2]

Unite collaborates on climate issues with groups such as the Trade Union Sustainable Development Advisory Committee and the Energy Intensive Users Group and the government to promote the need for sustainable and responsible change.[3]

We will monitor the covenant on a regular basis, with the support of our covenant advisor and maintain a regular dialogue with the Sponsor on the topic of climate-related risks.

[1] https://www.unitetheunion.org/news-events/news/2024/october/investment-in-carbon-capture-welcome-but-must-be-only-a-first-step#:~:text=Unite%20believes%20that%20it%20is,domestic%20manufacture%20of%20wind%20turbines
[2] https://www.learnwithunite.org/environment/
[3] https://www.learnwithunite.org/assets/Uploads/Unite-Tackling-The-Climate-Change-Crisis-2019-4-1.pdf

# 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 | Advisor / supplier support | Frequency of review |
|---|---|---|---|
| Climate change governance framework *(this document)* | ISC | Aon | Annual |
| Publish TCFD report and Engagement Policy and Implementation Statement | ISC | Aon | Annual |
| Add / review climate risks and activity on key Scheme documentation | ISC | Aon | Annual |
| Engage with the investment managers to understand how climate risks are considered in their investment approach, and stewardship activities are being undertaken appropriately | ISC | Aon, Investment managers | Ongoing |
| Trustee training | Trustee Board | Aon | Annual |
| Ensure investment proposals explicitly consider the impact of climate risks and opportunities, and seek investment opportunities | ISC | Aon | Ongoing |
| Ensure that actuarial and covenant advice adequately incorporate climate-related risk factors where they are relevant and material | ISC | Scheme Actuary, Covenant Advisor | Triennial |

### Trustee update

We monitor the above activities as part of our climate related risks and opportunities management. We have delegated responsibilities to all activities, with the exception of Trustee training, to the ISC. We have historically received training on climate-related issues to ensure that we have the appropriate degree of knowledge and understanding on these issues to support good decision-making.

We receive regular updates (at least annually) from the ISC and querying information as and when required.

## Strategy

| Activity | Delegated responsibility | Advisor / supplier support | Frequency of review |
|---|---|---|---|
| Identify climate-related risks and opportunities (over agreed time periods) for investment and funding strategy | ISC | Aon | Annual |
| Scenario analysis - annual review | Trustee Board | Aon | Annual |
| Scenario analysis - refresh modelling (when applicable) | Trustee Board | Aon | Triennial |
| Climate-related considerations as part of actuarial valuation | ISC | Scheme Actuary | Triennial |

### Trustee update

Climate-related risks and opportunities are included in the Scheme's wider risk management framework, which is overseen by the ISC. The ISC refreshed its risk and opportunities analysis, asking each material manager whether there have been material changes to their risk assessments compared to the previous year. The conclusion of this is included in the Strategy Pillar.

Alongside this, we have reviewed the appropriateness of the climate change scenario analysis carried out within the Scheme's initial TCFD disclosures and we are comfortable that the analysis remains relevant for the current reporting year.

## Risk management

| Activity | Delegated responsibility | Advisor / supplier support | Frequency of review |
|---|---|---|---|
| Considering the impact of climate change on the sponsoring employer | Trustee Board | Covenant Advisor | Annual |
| Consider the prioritisation of those climate-related risks, and the management of the most significant in terms of potential loss and likelihood | Trustee Board | Advisors | 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 | Trustee Board | Advisors | One-off, ongoing thereafter |

### Trustee update

We asked material managers to answer questions designed by the Pensions Climate Risk Industry Group to understand how they are managing climate-related risks. Climate risk management is integrated into the ongoing risk management activities of the Scheme via the climate risk management framework.

We delegate responsibility to the ISC to review the investment managers and how ESG is integrated within their decision-making processes, including climate change.

## Metrics and Targets

| Activity | Delegated responsibility | Advisor / supplier support | Frequency of review |
|---|---|---|---|
| Agree/review approach for metrics | Trustee Board | Aon | Annual |
| Agree/review target | Trustee Board | Aon | Annual |
| Obtain data for agreed metrics | Trustee Board | Aon / Investment Managers | Annual |

### Trustee update

We, supported by our investment consultant, collect carbon emissions data on an annual basis, to understand the current state of the portfolio regarding its emissions, data quality and portion of portfolio aligned with SBTi.

In addition, we have reviewed our targets which were set previously and we updated them this year. More details can be found in the Metrics and Targets section.

## Assessing our managers

To assess our 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, whether they produce their own TCFD reporting, 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 Scheme's investment managers.

| Manager | TCFD aligned climate reports | Climate-related risks analysis | Industry initiatives | Carbon reporting | Temperature alignment |
|---|---|---|---|---|---|
| Brookfield | ✓ | ✓ | ✓ | ✓ | - |
| Henderson | ✓ | ✓ | ✓ | ✓ | ✓ |
| LGIM | ✓ | ✓ | ✓ | ✓ | ✓ |
| Mirova | ✓ | ✓ | ✓ | ✓ | ✓ |
| Nuveen | - | ✓ | ✓ | ✓ | ✓ |
| Pictet | ✓ | - | ✓ | ✓ | ✓ |
| PIMCO | ✓ | ✓ | ✓ | ✓ | - |

Source: Managers.

Overall, we have seen an improvement in climate risk disclosures from our investment managers. Some of the key highlights include:

- We received responses from seven investment managers. This is fewer than last year because of disinvestments made by the Scheme over the year.
- The majority of the managers report in line with TCFD disclosures and have produced a TCFD report.
- Five managers have a temperature alignment goal compared to four last year.
- Progress is still needed with managers aligning their strategies towards an explicit temperature alignment goal; however, most managers have committed towards the Paris Agreement goals and net zero.

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 key 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 the *Appendix 7 – Greenhouse gas emissions in more detail.*

## Our climate-related metrics

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 GHG emissions

The total 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 ($tCO_2e$).

### 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 ($tCO_2e$/£m).

### Data quality

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

### Portion of portfolio with SBTi-verified targets

A metric which gives the alignment of the Fund's assets with the climate change goal of limiting the increase in the global average temperature to 1.5˚C above pre-industrial levels.

It is measured as the percentage of underlying portfolio investments with declared net-zero or Paris-aligned targets that have been verified by the Science based Target initiative ("SBTi").

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 to others and therefore it is not appropriate to combine them.

| | | | Scopes 1 & 2 | | | Scope 3 | | |
|---|---|---|---|---|---|---|---|---|
| **Asset class** | **Asset allocation** | **Year** | **Data Quality** (%) | **Total GHG emissions** ($tCO_2e$) | **Carbon footprint** ($tCO_2e/£m$) | **Data Quality** (%) | **Total GHG emissions** ($tCO_2e$) | **Carbon footprint** ($tCO_2e/£m$) |
| Equities | 27.5% | 2024 | 81.4% | 7,040 | 31.4 | 81.4% | 79,805 | 356.3 |
| | *27.1%* | *2023* | *89.6%* | *15,918* | *72.4* | *89.3%* | *118,515* | *540.7* |
| Illiquids | 6.8% | 2024 | 44.2% | 17 | 0.6 | 63.4% | 8,341 | 192.3 |
| | *6.8%* | *2023* | *13.6%* | *30* | *3.6* | *96.5%* | *9,657* | *161.3* |
| Diversified growth fund | 0.0% | 2024 | - | - | - | - | - | - |
| | *8.4%* | *2023* | *70.4%* | *2,146* | *40.0* | *70.0%* | *21,178* | *396.5* |
| Bonds | 33.4% | 2024 | 70.3% | 16,960 | 72.2 | 70.2% | 31,675 | 135.1 |
| | *37.8%* | *2023* | *60.7%* | *13,503* | *65.0* | *50.5%* | *78,331* | *452.8* |
| LDI[1] | 31.1% | 2024 | 100% | 76,070 | 141.2 | N/A | N/A | N/A |
| Physical exposure | 31.1% | 2024 | 100% | 55,795 | 141.2 | N/A | N/A | N/A |
| Synthetic exposure | - | 2024 | 100% | 20,275 | 141.2 | N/A | N/A | N/A |
| *LDI* | *19.7%* | *2023* | *99.6%* | *14,497* | *81.3* | *N/A* | *N/A* | *N/A* |

*Source: Investment managers / Aon. Data as at 30 September 2024 and 30 September 2023, unless specified otherwise. Where the data was provided in USD or EUR terms, Aon converted it to GBP terms using the appropriate FX rate as at 30 September 2024 and 30 September 2023. Please note that numbers may not sum due to rounding.*

*[1]The methodology for reporting emissions associated with LDI has evolved. Last year we used data provided by the manager. This year we used 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.*

*For the LDI assets, carbon metrics are shown for the physical government bonds and the synthetic exposure related to repurchase agreements.*

*Scope 3 emissions are currently not available for UK government bonds as there is no agreed methodology for calculating them.*

*Cash was excluded due to the nature of asset class and on the basis of materiality in both 2023 and 2024 reporting periods.*

## Commentary

The Scheme experienced a decrease in absolute GHG emissions for scopes 1 and 2 for equities and illiquid assets. Conversely, scopes 1 and 2 GHG emissions increased for bonds and LDI.

There was a decrease in scope 3 GHG emissions as carbon footprints have reduced significantly. The bonds asset class experienced the largest reduction in carbon footprint.

Overall, there was a modest improvement in the data quality for scopes 1 and 2 since last year. Data quality for scope 3 data has improved by c.4% since 2023. This can be attributed to developments in industry standards for scope 3 emissions.

### Equity

Total emissions and the carbon footprint have fallen across all scopes. This is due to disinvesting from an equity mandate and changes to the underlying investments of the remaining equity strategy. These changes also led to slightly lower data quality.

### Bonds

Scopes 1 and 2 emissions and footprint have increased modestly. Data quality has increased materially. There has generally been greater carbon intensity reported by the bonds managers which contributed to higher total emissions.

Total scope 3 emissions have decreased significantly. Carbon footprint has more than halved whilst the data quality increased by c.20%.

### Illiquids

Scope 1 and 2 emissions data is somewhat limited, but in general the carbon footprints reported were lower than last year which led to lower absolute emissions. Scope 3 carbon footprints and the corresponding absolute emissions are broadly in line with last year.

The data quality for scope 1 and 2 has improved substantially. This is expected over the years as the managers have been establishing more robust carbon reporting. Scope 3 data quality decreased because a manager who provided data last year was not able to provide data this year.

### LDI emission methodology

The total emissions associated with the LDI assets have increased substantially (by c. 62,000 tonnes of $CO_2$) 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.

Please see further detail on LDI carbon data methodology in *Appendix 6 – Additional information on metrics calculations.*

## Portion of portfolio with SBTi-verified targets

| Asset class | Asset allocation | Year | Portion of portfolio with SBTi-verified targets |
|---|---|---|---|
| Equities | 27.5% | 2024 | 43.3% |
| | *27.1%* | *2023* | *6.2%* |
| Bonds | 33.4% | 2024 | 26.6% |
| | *37.8%* | *2023* | *20.0%* |

Source: Investment managers / Aon. Data as at 30 September 2024 unless specified otherwise.

### Commentary

- Compared to last year, the proportion of equities that have SBTi-verified targets increased due to a change in the underlying equity mandate.
- The Scheme's bond managers reported an increase in the portion of the fund with SBTi-verified targets, thereby improving the overall figure.
- SBTi-verified figures have not been provided by the illiquids managers due to the nature of the underlying assets.
- LDI is not included in the table above because this metric is not applicable due to the nature of government bonds.

## Notes on the data

In general, we relied on information provided by the Scheme's investment managers about their greenhouse gas emissions. Our consultant, Aon, aggregated this information to calculate the metrics at the asset class level.

The exception to this is the metrics for the LDI; see *Appendix 6 – Additional information on metrics calculations* for more information.

### Availability of data

- Five managers provided scopes 1, 2 and 3 GHG emissions.
- Illiquid manager Mirova provided scope 3 emissions only which is in line with last year's reporting.
- Illiquid manager Nuveen was not able to provide scope 3 emissions data.
- BlackRock and JP Morgan were excluded from this year's analysis as the Scheme is in the process of disinvesting from these funds and only a small amount of residual assets remain.

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, we expect to reflect this improvement in the future years of reporting.

### The Carbon Emissions Template

Our investment consultant, 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.

In our first year of reporting, we set a target to improve data quality and decrease carbon footprint until the end of 2024. Without meaningful data from the investment managers, it is very hard for us to measure our climate-risk exposure. So, it is important to set a target to improve the data quality of the GHG emissions data from the managers.

## Progress made towards our target

Since setting the target, we have observed modest improvements in data quality and a reduction in the carbon footprint for our portfolio.

**Data quality**

The data quality for scopes 1 and 2 emissions (excluding LDI) increased by c.5% compared to last year, however it is broadly flat since we started monitoring in 2022. The data quality for scope 3 emissions also increase by c.5% since last year.

| | | 2024 | 2023 | 2022 |
|---|---|---|---|---|
| **Total portfolio (excluding LDI)** | Scopes 1 & 2 | 72.2% | 67.5% | 75.4%[2] |
| | Scopes 3 | 74.0% | 69.6% | - |
| **LDI**[1] | Scopes 1 & 2 | 100% | 99.6% | - |

*[1]We assumed the data quality for LDI is 100% estimated due to the methodology of calculating.*
*[2]In 2022 metrics data was aggregated for the whole portfolio, but due to the methodology developments over time we now show LDI separately.*

**Carbon footprint**

The carbon footprints for scopes 1 and 2 emissions and scope 3 emissions of the portfolio (excluding LDI) have decreased since we began monitoring.

| | | 2024 | 2023 | 2022 |
|---|---|---|---|---|
| **Total Portoflio (excluding LDI)** | Scopes 1 & 2 | 49.1 | 64.5 | 81.6[2] |
| | Scope 3 | 238.8 | 450.4 | - |
| **LDI** | Scopes 1 & 2 | 141.2 | 81.3 | - |

*Please see the footnotes on page 24 above.*

### Trustee update

Each year we review the suitability of the target we have set. Based on the data collected and the metrics calculated this year, we have revised our target.

## The Scheme's future targets

This year we reviewed the targets and we decided to update our target as follows:

**Data Quality Target**

90%

by 2030
for scopes 1 and 2, and scope 3 emissions
for the asset portfolio excluding LDI

We will continue monitoring the carbon footprint of the Scheme's assets.

With continued improvements in methodology to obtain this data we expect to see positive progress year on year.

# Appendices

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

# Appendix 1 - Glossary

| | |
|---|---|
| Governance | refers to the system by which an organisation is directed and controlled in the interests of shareholders and other stakeholders.[4] 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.[5] |
| Strategy | 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.[6] |
| Risk management | 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.[7] |
| Climate-related risk | 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.[8] |
| Climate-related opportunity | 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.[9] |
| Value chain | 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).[10] |
| Net zero | 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.[11] |

[4] A. Cadbury, Report of the Committee on the Financial Aspects of Corporate Governance, London, 1992.

[5] OECD, G20/OECD Principles of Corporate Governance, OECD Publishing, Paris, 2015.

[6] TCFD, Recommendations of the Task Force on Climate-related Financial Disclosures, 2017

[7] TCFD, Recommendations of the Task Force on Climate-related Financial Disclosures, 2017

[8] TCFD, Recommendations of the Task Force on Climate-related Financial Disclosures, 2017

[9] TCFD, Recommendations of the Task Force on Climate-related Financial Disclosures, 2017

[10] TCFD, Recommendations of the Task Force on Climate-related Financial Disclosures, 2017

[11] 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 – Asset class level climate risk assessment

**Equities – 27.5% of portfolio** *(+0.4% compared to last year)*

*Please note that the Scheme's Global Equity manager, Janus Henderson was not able to provide an overall RAG rating for physical and transition risks over the different time periods. This was partly due to the market neutral and synthetic nature of the fund, which uses derivatives, for which climate related risks and opportunities are difficult to quantify.*

**Illiquids – 6.8% of portfolio** *(in line with last year)*

Mirova Energy Transition Fund V

**Physical Risks**

| | Acute | Chronic |
|---|---|---|
| Short | G | G |
| Medium | G | G |
| Long | G | G |

The manager considers there to be a low level of acute and chronic physical-related financial risk associated within changes in temperature and precipitation patterns. The manager recognises that overtime the fund may be exposed to extreme weather events, damaging renewable energy assets and rising sea levels which may pose a threat to assets located in coastal regions. However, these risks identified are still considered to be low.

**Transitional Risks**

| | Regulatory | Technology | Market | Reputation |
|---|---|---|---|---|
| Short | G | G | G | G |
| Medium | G | G | G | G |
| Long | G | G | G | G |

The manager identified low exposure to transitional risks across all three time periods. Short-term risks associated with technology are perceived to be low as the manager only invests in mature technology projects. As the long-term approaches the fund may benefit from technological innovation in the renewable sectors, leading to lower costs and greater efficiency. Greater access to green finance is also expected to benefit the fund, leading to a low transitional risk associated with markets and technology.

Brookfield Global Transition Fund I

**Physical Risks**

| | Acute | Chronic |
|---|---|---|
| Short | A | G |
| Medium | A | G |
| Long | A | A |

The manager identified material risk to the portfolio caused by acute weather events such as flooding, wildfires, and landslides. The increase in frequency and severity of extreme conditions may impact some of their invested assets. However, the manager does not consider chronic physical risks to be material over the short and medium-term, thus stating the financial exposure to these risks as low. In the long-term the manager does anticipate higher risk due to extreme heat, impacting some of their wind and solar assets.

**Transitional Risks**

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

The manager identified exposure to technological risk to the portfolio, primarily driven by supply chain constraints in the short-term as the world moves towards decarbonisation. In addition, the manager believes the portfolio is likely to experience market risk in the medium and long-term due to increased competition in the renewable energy market as investors reallocate capital to clean energy. Reputation risks associated with failure to meet decarbonisation targets may also lead to outflows of capital and result in a negative financial impact.

**Bonds – 33.4% of portfolio** *(-4.4% compared to last year)*

PIMCO Diversified Income Fund and ESG Global Investment Grade Credit Fund (GIGC)

*Please note that the manager has updated their assessment of climate related risks, whereby it has aggregated the RAG ratings over time horizons and across different types of physical and transition risks. The manager was still able to demonstrate a good understanding of physical and transitional risks.*

**Physical Risks**

| Physical Risks |
|---|
| R |

The manager recognises that both acute and chronic risks are more likely to become both increasingly frequent and severe over a longer period. It states that climate models suggest that these impacts will be exacerbated in the very long-term (second half of the century) and could potentially remain moderate in the mid-term (by 2035).

**Transitional Risks**

| Transitional Risks |
|---|
| R |

The manager notes that in the short run, that reputational risks, associated with the energy transition, have become more prominent for the fossil fuel industry in particular. Changing customer behaviour due to the awareness of climate risks is likely to grow over time and increasingly impact “end user” sectors as it relates to energy demand. However, the lack of substitution technologies could serve to mitigate some transition risks across certain key sectors, notably ‘hard to abate’ sectors e.g. cement, steel, shipping, aviation, trucking.

Pictet Absolute Return Fund

**Physical Risks**

| | Acute | Chronic |
|---|---|---|
| Short | A | G |
| Medium | G | G |
| Long | G | G |

The manager does not consider chronic physical risks to be material over the time period considered, thus stating the financial exposure to these risks as low. In the short term, the manager does identify material financial exposure to acute physical. These acute physical risks can be associated with severe weather events leading to damage and therefore a negative impact on an investments financial value.

**Transitional Risks**

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

The manager identifies both regulatory and market risks in the short-term to be medium. This can be explained by the growing regulatory requirements and complexity involved in responding to such regulations. Market risks associated with inadequately managing changes in policy may drive client outflows and result in a negative financial impact in the short-term.

LGIM Core Plus Bonds Fund

**Physical Risks**

| | Acute | Chronic |
|---|---|---|
| Short | G | G |
| Medium | G | G |
| Long | A | G |

The manager suggests that both chronic and acute risks are only significant in the long term and are not expected to have a significant financial impact in the short and medium term. In the long-term, the manager believes that as extreme weather events become more frequent and severe the impact of acute risks are likely to become more significant. Furthermore,

**Transitional Risks**

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

Over the medium and long-term the manager identifies a medium risk in several categories as policy changes shift demand patterns resulting in bond valuations being negatively impacted. Regulatory risk is also viewed as a medium risk in the medium-term as this is a crucial period for the climate transition, as time is running out to stay within global carbon budgets for limiting global warming to well-below 2°C. The Manager notes

acute physical risks are likely to become significant, rising sea levels and changes to weather patterns are likely to affect companies' profitability. Companies who fail to adapt to changing conditions may struggle to maintain their labour force or business model.

that those failing to adapt for the scale of technological change in the long-term could suffer significant losses from demand reductions.

**LDI – 31.1% of portfolio** *(+11.4% compared to last year)*

LGIM LDI

**Physical Risks**

| | Acute | Chronic |
|---|---|---|
| Short | G | G |
| Medium | G | G |
| Long | A | G |

**Transitional Risks**

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

The manager notes that in the short-term, acute physical risks aren't expected to have a material financial impact either, in the medium-term acute physical risk exposure is expected to increase. Pathways are expected to diverge significantly in the long term, although all climate future, will entail a worsening of acute physical risk from today. In the long-term, as extreme weather events become more frequent, severe, and unpredictable, they are likely to have a growing impact at a portfolio level. Acute physical risks are likely to become significant in the long-term, with rising sea levels and changes to weather patterns affecting companies' profitability.

The manager considers there to be a low likelihood of material financial risk in the short-term. The medium-term is a crucial period for the climate transition. To ensure emissions stay within global budgets for limiting global warming to well-below 2°C, carbon prices will need to continue rising over the long term. Carbon prices are likely to exceed US$100/tCO2 by 2050 in both orderly and disorderly transitions, leading to material financial implications. From a market perspective, demand and supply for key raw materials will be mismatched going forward. Critical minerals feeding into low-carbon technologies such as renewables and EV batteries need to scale up supply to meet the potentially explosive growth in demand.

# Appendix 4 - 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 different climate change scenarios and the approximate impact on the asset (and liability) values over the long-term from 30 June 2021.

Aon's model uses a deterministic projection of assets and liabilities, using standard actuarial techniques to discount and project expected cashflows.

i. 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.
ii. The parameters in the model vary deterministically with the different scenarios.

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. Other modelling assumptions for assets.

# Appendix 5 – Metrics – Detailed breakdown

| | | | Scopes 1 & 2 | | | Scope 3 | | |
|---|---|---|---|---|---|---|---|---|
| **Asset class** | **Year** | **%** | **Data Quality** (%) | **Total GHG emissions** ($tCO_2e$) | **Carbon footprint** ($tCO_2e$/£m) | **Data Quality** (%) | **Total GHG emissions** ($tCO_2e$) | **Carbon footprint** ($tCO_2e$/£m) |
| **Equities** | 2024 | 27.5% | 81.4% | 7,040 | 31.4 | 81.4% | 79,805 | 356.3 |
| | *2023* | *27.1%* | *89.6%* | *15,918* | *72.4* | *89.3%* | *118,515* | *540.7* |
| Janus Henderson – Passive Global Equities | 2024 | 27.5% | 81.4% | 7,040 | 31.4 | 81.4% | 79,805 | 356.3 |
| | *2023* | *27.1%* | *89.6%* | *15,914* | *54.9* | *89.3%* | *118.513* | *408.8* |
| **Illiquids** | 2024 | 6.8% | 44.2% | 17.4 | 0.6 | 63.4% | 8,341 | 192.3 |
| | *2023* | *6.8%* | *13.6%* | *30* | *3.6* | *96.5%* | *9,657* | *161.3* |
| Nuveen – Global Real Estate Debt Partners Fund II | 2024 | 1.9% | 100% | 6.0 | 0.3 | 0.0% | 0 | 0 |
| | *2023* | *1.5%* | - | - | - | *100%* | *306* | *11.1* |
| Mirova – Energy Transition Fund V | 2024 | 2.8% | - | - | - | 80.0% | 2,747 | 123.2 |
| | *2023* | *2.3%* | - | - | - | *89.9%* | *2,490* | *130.2* |
| Brookfield – Global Transition Fund I | 2024 | 2.1% | 51.0% | 12.0 | 1.1 | 100% | 5,594 | 265.6 |
| | *2023* | *3.0%* | *64.0%* | *30* | *3.6* | *100%* | *6,860* | *522.4* |
| **Bonds** | 2024 | 33.4% | 70.3% | 16,960 | 72.2 | 70.2% | 31,675 | 135.1 |
| | *2023* | *37.8%* | *60.7%* | *13,503* | *65.0* | *50.5%* | *78,331* | *452.8* |
| PIMCO – GIGC ESG Fund | 2024 | 10.3% | 92.7% | 3,245 | 35.6 | 93.3% | 222 | 2.4 |
| | *2023* | *9.9%* | *92.9%* | *2,130* | *25.5* | *92.3%* | *12,453* | *150.1* |
| PIMCO – DIF | 2024 | 5.4% | 75.0% | 9,280 | 241.3 | 73.0% | 292 | 7.8 |
| | *2023* | *7.7%* | *70.7%* | *8,261* | *149.0* | *72.7%* | *53,545* | *939.1* |
| Pictet – Absolute Return Bonds | 2024 | 10.4% | 69.7% | 3,414 | 49.2 | 69.7% | 9,711 | 140.0 |
| | 2023 | *10.2%* | *8.5%* | *214* | *27.0* | *8.5%* | *248* | *32.0* |
| LGIM – Core Plus Fund | 2024 | 7.3% | 42.2% | 1,625 | 28.4 | 42.2% | 13,065 | 598.0 |
| | *2023* | *8.9%* | *76.0%* | *2,871* | *47.1* | *31.4%* | *12,085* | *479.9* |
| **LDI** | 2024 | 31.1% | 100% | 76,070 | 141.2 | - | - | - |
| | *2023* | *19.7%* | *99.6%* | *14,497* | *81.3* | - | - | - |
| Physical exposure | 2024 | 31.1% | 100% | 55,795 | 141.2 | - | - | - |
| Synthetic exposure | 2024 | - | 100% | 20,275 | 141.2 | - | - | - |
| *Physical and synthetic exposure* | *2023* | *19.7%* | *99.6%* | *14,497* | *81.3* | - | - | - |

*Source: Investment managers / Aon. Data as at 30 September 2024 and 30 September 2023, unless specified otherwise. Where the data was provided in USD or EUR terms, Aon converted it to GBP terms using the appropriate FX rate as at 30 September 2024 and 30 September 2023. Please note that numbers may not add up due to rounding.*

*1. In 2023 the metrics included a Neuberger Berman equity fund, a BlackRock diversified growth fund and a JP Morgan multi-asset credit fund. The Scheme no longer invests in these funds as at 30 September 2024 and so they are not included as separate line items in the table above. They are included in the 2023 metrics at the asset class level.*

*2. The methodology for reporting emissions associated with LDI has evolved. Last year we used data provided by the manager. This year we used 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.*

*For the LDI assets, carbon metrics are shown for the physical government bonds and the synthetic exposure related to repurchase agreements.*

*Scope 3 emissions are currently not available for UK government bonds as there is no agreed methodology for calculating them.*

*Other notes:*

*3. Cash was excluded from the metrics analysis on the basis of materiality.*

*4. Nuveen stated that Scope 3 data is not available at the point of writing. Scope 3 can be provided, at firm level, later in the year.*

*5. Aon engaged with PIMCO to understand the reduction in Scope 3 carbon footprint, however they have stated that they cannot provide attribution commentary on Scope 3 carbon footprint data.*

*6. LGIM Core plus fund data quality has reduced since last year due to the change in methodology/definition of data quality.*

## Additional notes on data

The material provided herein is grounded in part from publicly available information and information from third-party sources (e.g. the investment managers) with whom we have a contractual relationship and we believe to be reliable, but which have not been independently verified by us, and we do not represent that the information is accurate or complete.

# Appendix 6 – 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[12]. Managers provided carbon footprint and data quality 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 quality.*

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:

$$\textit{carbon footprint for the asset class} = \frac{\sum Gi}{\sum(Ai \times Ci)}$$

Where $i$ is each fund in the asset class

$G_i$ = Total GHG for fund $i$ ($tCO_2e$)

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

$C_i$ = Data Quality 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:

$$\frac{\textit{UK national emissions scopes 1 and 2}}{\textit{PPP-adjusted GDP}}$$

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 quality*

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

Where data quality is assumed to be 100% estimated.

[12] https://www.plsa.co.uk/Policy-and-Research/Document-library/Carbon-Emissions-Template

# Appendix 7 – 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[13] 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 ($CO_2e$). 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

$CO_2$
Carbon dioxide

$CH_4$
Methane

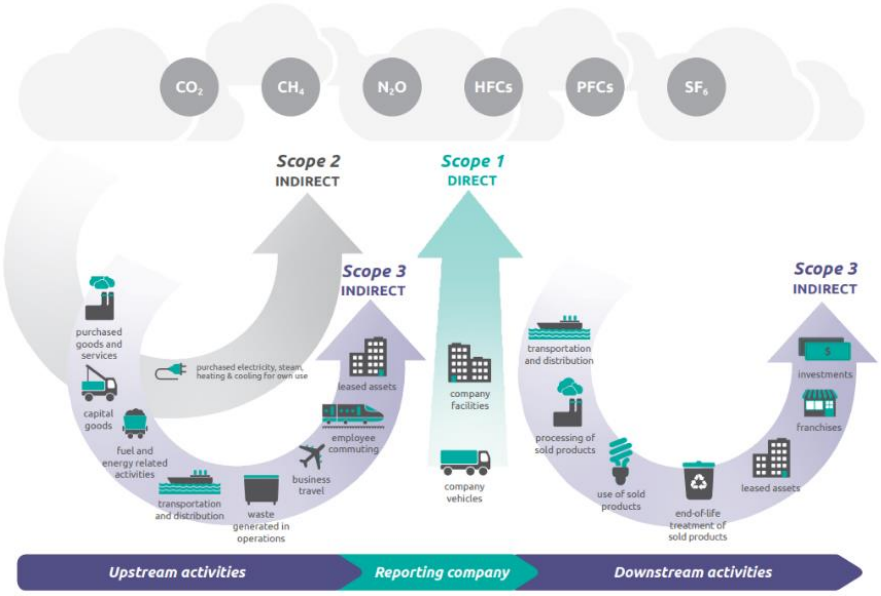
$N_2O$
Nitrous oxide

HFCs
Hydrofluorocarbons

PFCs
Perfluorocarbons

$SF_6$
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, 2011

[13] https://unfccc.int/kyoto_protocol