General Motors (VML) Pension Plan (the “Plan”)

Climate change report

A report for members by the Trustee of the General Motors (VML) Pension Plan

Plan Year ending 31 December 2024

Why have we written this report?

In the UK it is mandatory for the largest companies and financial organisations to disclose their climate-related risks and opportunities. This is part of the government's commitment to making the UK financial system the greenest in the world.

This report provides members the opportunity to find out more about how the Trustee has identified, assessed and managed climate-related risks and opportunities to the Plan during the year to 31 December 2024.

The Trustee views climate change as a risk to society, the economy and the financial system, but also recognises that reducing carbon emissions throughout the economy presents opportunities. These risks and opportunities may impact the Plan's financial position, for example by impacting the businesses the Plan invests in.

We recognise the scale of the climate change challenge but nonetheless believe we can help drive positive change through our investment and stewardship decisions. Our fiduciary duty is to ensure members' benefits are paid and, with this in mind, we expect our investment managers to deliver performance in line with our investment strategy, which takes into account climate change risk. Effective mitigation of the financial risks arising from climate change, and careful selection of opportunities presented by the transition, should benefit our members, our wider communities and the planet itself.

It is the third climate change report by the Trustee of the Plan. We hope you find it informative and would welcome any feedback.

Signed, on behalf of the Trustee:

Rob Assinder (Trustee Chair)

Introduction

About the General Motors (VML) Pension Plan (the “Plan”)

The Plan is a defined benefit pension arrangement (sometimes known as a final salary pension) that is closed to new members. The Plan has a long time-horizon, with some existing benefits expected to still be in payment beyond 2080.

As at 31 December 2024, it has assets of around £2 billion. As the funding position has improved, we have substantially reduced the Plan’s investment risk, moving from growth assets (mainly listed equities) to corporate bonds and UK government bonds. This is in line with changes in the value of the Plan’s liabilities and our prudent de-risking strategy.

We continue our journey towards a position where we are no longer dependent on our sponsor’s financial support, and plan further changes to the strategic asset allocation to help secure our members’ benefits. It is important to note that the investment decisions we take in support of paying members’ benefits are independent of the business investment decisions our sponsor makes to generate returns for its shareholders.

The Trustee is assisted by General Motors Investment Management Corporation (“GMIMCo”) who has been appointed to provide certain discretionary investment management services to the Trustee, including: managing and rebalancing the Plan’s assets; and appointing and removing third party investment managers.

The purpose and structure of this report

The purpose of this report is to describe the Plan’s governance framework for managing climate-related risks and opportunities and how it has been implemented in the year to 31 December 2024. It is the Plan’s third report in line with the recommendations of the **Taskforce on Climate-Related Financial Disclosures (“TCFD”)**, as required by the 2021 Climate Change Governance and Reporting Regulations for Occupational Pension Schemes.

This report covers the TCFD’s thematic areas of: (1) **Governance –** How the organisation’s board, committees and senior management are assessing, managing and monitoring climate-related risks and opportunities; (2) **Strategy –** Actual and potential impacts of climate-related risks and opportunities on the organisation’s businesses, strategy and financial planning where such information is material; (3) **Risk Management –** The processes for identifying, assessing and managing climate-related risks, and how these are integrated into the organisation’s overall risk management; and (4) **Metrics and Targets –** The metrics and targets the organisation uses to assess and manage relevant climate-related risks and opportunities.

Executive summary

The following are a summary of some key points from the detailed report that follows:

- We consider climate change a financially material factor for the Plan and therefore believe that appropriate treatment of climate-related risks and opportunities for the Plan's investments should improve outcomes for the members through better long-term returns and lower risk. We have therefore allocated significant time and resource to this topic.
- We maintain Climate Governance processes (described on pages 6-10) which outlines the responsibilities in relation to climate change. Climate is also integrated into the overall risk register for the Plan. We remain focussed on delivering our key objective of delivering members' benefits, but within that we seek to ensure that climate-related risks have been properly managed, and opportunities appropriately considered.
- We have considered how such risks and opportunities might affect the funding strategy, investment strategy and the Company's ability to provide financial support for the Plan. This includes by modelling the Plan under different potential climate scenarios (noting modelling limitations). Each year we re-confirm whether a full re-run of the modelling is beneficial; this year we did not update the analysis as there had not been material changes to the Plan or modelling that we would expect to impact the results. The Trustee has agreed to refresh this scenario analysis in 2025.
- Through the climate work we have undertaken, we have identified a number of risks and opportunities to the Plan arising from physical changes to the climate itself and from steps being taken to limit climate change. We continue to work through actions and engage with the Plan's fund managers on the issues we deem to be most important.
- With the help of our advisers, we assess our fund managers' sustainability practices, including their ability to protect the Plan's assets from negative impacts of climate change, on an annual basis.
- We have collected data on four climate-related metrics: (1) total emissions; (2) carbon footprint (emissions per £m invested); (3) a measure of alignment with a transition to a net zero economy; and (4) data quality. This is the third year in which we are reporting on our climate data, and we have included a comparison of the Plan's Scope 1 + 2 climate metrics and Scope 3 emissions metrics against last year's results.
- We have set targets against the third metric – portfolio alignment – with a view to increasing the number of investments in the Plan's listed equity and corporate bond portfolios that have approved Science Based Targets. By 31 March 2025 we are targeting 45% portfolio alignment for assets within scope (further details on this is set out on page 23). This calls for a roughly 6% year-on-year increase in holdings' SBT alignment – which was slightly ahead of the expected market take-up rate at the time. We have observed an increase in portfolio alignment over the past two years – though note a slowdown in corporate bond take-up over the past year. We are broadly comfortable with this progress, cognisant that the path will not be linear, but are interrogating the corporate bond results further to better understand what the future trajectory might look like and how this might affect the target we set (which will be reviewed in 2025).
- Collecting metrics helps us to identify climate exposures, but we are conscious there remain material data gaps. Our investment consultant and GMIMCo is supporting us in working with our investment managers to encourage improvement in both the quality and the coverage of reporting on climate data. While we are encouraged by the progress that has been made in this respect, it is widely recognised that there remain shortcomings in the quality and completeness of the emissions data available for many assets.

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Overview

We recognise that estimations and assumptions made in this report are not definitive. This is an issue faced by all investors and businesses grappling with measuring their climate risk exposure. As data quality improves, our reporting and approach to integrating the effects of climate change into our investment decisions will improve.

Our managers understand that we expect them to continue encouraging and supporting investee companies and, where applicable, sovereigns, to increase their disclosure of comprehensive emissions data, establish robust transition plans, and set science-based targets. We also emphasise the importance of collaboration with policymakers and participation in industry initiatives across our pension fund assets.

The Trustee has considered how the Plan's sponsor might be impacted by climate-related issues and how this might affect its ability to support the Plan. All companies will be affected to some extent and the economy will suffer significant damage in the long-term if temperatures continue to rise. In the shorter-term we recognise that the automotive sector is exposed to changes in the global economy as society adopts lower-carbon solutions. We fully support the goal of the group (General Motors) to be carbon neutral in its global products and operations by 2040.

The Plan's reliance on the sponsor has reduced over time and is expected to continue to do so. Our modelling has shown (eg on page 14) that the Plan's funding level appears relatively resilient to the impacts of the climate change scenarios considered, noting the inherent uncertainties involved in such analysis. However, we appreciate that we are, as a pension plan, and as a sector, at the start of a journey and there is more ground to cover.

We are pleased to publish this report, which outlines our approach and documents our progress in addressing climate-related risks and opportunities. We believe the Plan is relatively well-positioned for the potential risks arising from climate change, but there is more for us to do. Climate change continues to be a focus, and I look forward to providing a further update next year.

Published alongside the Plan's annual report and accounts for the year to 31 December 2024, and available online: https://pensioninformation.aon.com/generalmotors/documents.aspx.

Governance

The Trustee has ultimate responsibility for making decisions and ensuring effective governance of climate change risks and opportunities in relation to the Plan.

1. The Trustee's role

The Trustee Chair, with support from the Trustee Secretary, ensures that sufficient time is allocated for consideration and discussion of climate matters.

The Trustee is responsible for ensuring effective climate governance arrangements are in place for the Plan, which includes:

- Ensuring training is provided to Trustees in relation to knowledge and understanding of climate change to fulfil their statutory and fiduciary obligations. This includes knowledge and understanding of the principles relating to the identification, assessment and management of climate-related risks and opportunities for the Plan;
- incorporating climate-related considerations into strategic decisions relating to the Plan's investments and funding arrangements;
- allowing for climate-related considerations when assessing and monitoring the strength of the sponsoring employer's covenant;
- engaging with the Plan's actuarial, investment, covenant and legal advisers to ensure that climate related risks and opportunities are adequately considered in relation to its investment beliefs, investment policies and governance arrangements;
- appointing actuarial, investment, and covenant advisers that: (i) have adequate expertise and resources, including time and staff, to carry out their responsibilities; (ii) are taking adequate steps to identify and assess any climate-related risks and opportunities which are relevant to the matters on which they are advising; and (iii) are adequately prioritising climate-related risks;
- communicating with Plan members and other stakeholders on climate change where appropriate, including public reporting such as this report.

The Trustee seeks to identify, assess and manage climate risks and opportunities, with some matters delegated to the Investment Committee and GMIMCo. The Trustee is supported by its external advisers.

Investment Committee ("IC")

The Investment Committee's roles and responsibilities are set out in a Terms of Reference, which is reviewed by the Trustee Board periodically. The IC is a sub-group of the Trustee, which has delegated powers to make decisions related to investment matters but will refer matters to the Trustee as applicable under the Terms of Reference or otherwise as it considers appropriate. The IC reports regularly to the Board in relation to work it has undertaken and decisions it has made. The Trustee does not believe that conflicts of interest are likely and is satisfied that the structure and terms of the IC mean that in any event these are well managed.

The IC is responsible for taking such actions as it considers necessary to ensure that the Plan meets its reporting requirements in relation to investments including on TCFD disclosures. The work of the IC will include:

- overseeing the Plan's policies, regulatory obligations and priorities in respect of climate-change related matters including ensuring compliance with associated reporting regulations;
- incorporating climate-related considerations into: (i) the Trustee's investment beliefs and the Plan's investment policies; and (ii) the strategic decisions relating to the Plan's investment framework;
- determining the short-, medium- and long-term periods to be used when identifying climate-related risks and opportunities for the Plan;
- identifying and assessing the main climate-related risks and opportunities for the Plan over the agreed time periods and documenting the management of them (including incorporating in the Plan's risk register);
- working with GMIMCo to ensure that the Plan's investment managers have processes in place for managing climate-related risks and opportunities in relation to the Plan's investments, and have appropriate processes, expertise and resources to do this effectively; and
- selecting and reviewing metrics to inform the Trustee's identification, assessment and management of climate-related risks and opportunities; and setting and monitoring targets to improve these metrics over time. This includes carrying out scenario analysis as and when required.

2. Other parties' and advisers' roles

GMIMCo (in-house investment team)

GMIMCo's roles and responsibilities are set out in the Plan's Statement of Investment Principles, which is reviewed by the Trustee regularly. The Trustee does not believe that conflicts of interest are likely and is satisfied that the structure and terms of GMIMCo mean that in any event these are well managed.

In broad terms, GMIMCo is responsible for implementing the investment of the Plan's assets, including:

- incorporating the Trustee's investment beliefs, including responsible investment and climate beliefs, into manager selection, mandate design and manager monitoring;
- working with investment managers to understand and potentially improve their processes in relation to climate change considerations;
- communicating with stakeholders for, but not limited to, the purposes of the Trustee's TCFD reporting as appropriate; and
- working with the Trustee's other advisers to assist the Trustee in incorporating climate change in its governance arrangements as appropriate.

Investment managers

The Plan's investment managers are responsible for:

- identifying, assessing and managing climate-related risks and opportunities in relation to the Plan's investments, in line with the investment management arrangements agreed with the Trustee and/or GMIMCo;
- exercising rights (including voting rights) attaching to the Plan's investments, and undertaking engagement activities in respect of those investments, in relation to climate-related risks and opportunities in a way that seeks to improve long-term financial outcomes for Plan members;
- reporting on stewardship activities and outcomes in relation to the Plan's investments, wherever feasible; and
- providing information to GMIMCo and the Plan's investment advisers on climate-related metrics in relation to the Plan's investments, as agreed from time to time, and using its influence with investee companies and other parties to improve the quality and availability of these metrics over time.

Actuarial adviser

In broad terms, the Plan's actuarial adviser is responsible, as requested by the Trustee, for:

- advising how climate-related risks and opportunities might affect the Plan's funding position over the short-, medium- and long-term and the implications for the Plan's funding strategy, long-term objective and journey plan;
- working with the Trustee's other advisers to assist the Trustee in incorporating climate change in its governance arrangements as appropriate.

Covenant adviser

In broad terms, the Plan's covenant adviser is responsible, as requested by the Trustee, for:

- considering in periodic covenant reviews how climate-related risks and opportunities might affect the Plan's sponsoring employer over the short-, medium- and long-term and the implications for the Plan's journey plan;
- Including as appropriate in the Plan's covenant reviews the policies and practices of the sponsoring employer relating to climate change, and the employer's progress against any climate-related targets it has set; and
- working with the Trustee's other advisers to assist the Trustee in incorporating climate change in its governance arrangements as appropriate.

2. Other parties' and advisers' roles (cont.)

Investment adviser

The Plan's investment adviser is responsible, as requested by the Trustee or Investment Committee, for:

- providing training and other updates to the Trustee and Investment Committee on relevant climate-related matters;
- helping the Trustee to formulate its investment beliefs in relation to climate change and reflecting these in the Plan's investment policies and strategy;
- advising how climate-related risks and opportunities might affect the different asset classes in which the Plan might invest over the short-, medium- and long-term, and the implications for the Plan's investment strategy and journey plan;
- working with GMIMCo to advise the Trustee on the appropriateness and effectiveness of the Plan's investment manager's processes, expertise and resources for managing climate-related risks and opportunities, given the Trustee's investment objectives and beliefs. This includes engaging with the managers to improve their climate-related integration over time;
- assisting the Trustee, Investment Committee and GMIMCo in incorporating climate change in its investment monitoring;
- assisting the Trustee and IC in identifying, monitoring and using suitable climate-related metrics and targets in relation to the Plan's investments, including liaising with GMIMCo and the Plan's investment managers regarding provision of the metrics;
- leading on the preparation of the Trustee's TCFD reporting, and assisting with other communication with stakeholders in relation to climate change; and
- working with the Trustee's other advisers to assist the Trustee in incorporating climate change in its governance arrangements, risk register, and monitoring framework and communication with stakeholders (including, but not limited to, its TCFD reporting) as appropriate.

3. Trustee monitoring

The Trustee and Investment Committee consider a range of different information about the climate change risks and opportunities faced by the Plan to enable them to fulfil their responsibilities set out above. The Trustee (or Investment Committee as appropriate) will review, revise and approve this when required, according to their roles and responsibilities.

Quarterly

Receive and review:

- updates on the Plan's investments from GMIMCo and the Plan's investment adviser.

These documents will incorporate climate-related risks and opportunities as appropriate.

Annual

At one or more meeting each year, receive, review, revise (where appropriate) and approve:

- its governance arrangements, investment beliefs and investment policies in relation to climate change, including reviewing the Plan's risk register;
- its TCFD reporting;
- a plan covering the main topics (including in relation to ESG and climate change) due to be discussed at Board meetings in the following year;
- whether it is appropriate to carry out scenario analysis that illustrates how the Plan's assets and liabilities might be affected under various climate change scenarios;
- data on ESG metrics for the Plan's investments from its investment advisers, including at least four climate-related metrics, and performance against any targets set in relation to these metrics;

3. Trustee monitoring (cont.)

Annual (cont.)

- whether to retain or replace any targets set in relation to these climate-related metrics; and
- the advisers' climate competency and assess how they have performed against their climate responsibilities.

At least every three years (or following major changes)

- a responsible investment report from the Plan's investment adviser that reviews the Plan's investment managers in relation to ESG factors and climate change;
- choice of short-, medium- and long-term time periods to be used when identifying climate-related risks and opportunities to the Plan;
- scenario analysis that illustrates how the Plan's assets and liabilities might be affected under various climate change scenarios, along with commentary on the potential impacts for the sponsoring employer and the implications for the resilience of the Plan's funding and investment strategies;
- Its choice of metrics to inform the Trustee's identification, assessment and management of climate-related risks and opportunities; and
- the Plan's risk register is updated following review, to incorporate climate-related risks and opportunities as appropriate.

Oversight activity – appointments

The Trustee seeks input from its investment, actuarial and covenant advisers to ensure that it can identify, assess, and manage climate risks and opportunities.

Over 2024, the Trustee and Investment Committee maintained oversight of climate change risk, based on information provided to them by their advisers, GMIMCo and investment managers. Where appropriate, the Trustee has questioned the information provided to it to ensure it has a clear understanding of the risks facing the Plan and the actions being taken to mitigate them.

When appointing new advisers in the future, the Trustee will take into account whether the advisers have suitable climate credentials. In particular, the Trustee seeks to appoint advisers with sufficient market presence and reputation in order to have confidence that they have appropriate credentials and competence with respect to advising on climate risk matters. The Trustee will consider the extent to which the advisers' climate-related responsibilities are included in the agreements and/or any adviser objectives set.

With appropriate advisers in place, the Trustee ensures that climate-related risks and opportunities are considered as part of any relevant advice such as actuarial valuations, investment strategy reviews and assessments of the sponsoring employer's covenant.

Determining the correct apportionment of resources

The key rationale for allocating resources to this area is that the Trustee believes that:

- Environmental, Social and Governance ("ESG") factors are likely to be one area of market inefficiency and so managers may be able to improve risk-adjusted returns by taking account of ESG factors (which include factors relating to climate change).
- responsible investment in well governed companies and engaging as long-term owners can reduce risk over time and may positively impact Plan's returns;
- long-term environmental, social and economic sustainability factors should be considered by the Trustee and GMIMCo when making investment decisions.

These beliefs are incorporated into the Plan's Statement of Investment Principles, which sets the policy of the Trustee on various matters governing decisions about the investments of the Plan.

Governance

3. Trustee monitoring (cont.)

Oversight activity – objectives set for advisers

A climate related objective is included in the Trustee's investment consultant objectives with which it reviews its investment consultant on an annual basis.

Climate-related investment adviser's objectives

- Help the Trustee implement an investment strategy that integrates its policy on ESG (including climate change) and stewardship

Some activities undertaken

During 2024, the Trustee and the Investment Committee allocated meeting time to climate-related topics and commissioned additional advice in order to deepen its understanding of climate change, enhance the Plan's management of climate-related risks and opportunities, and satisfy its regulatory obligations.

A selection of climate-related agenda items undertaken during Plan Year are set out on the right.

February 2024:

- Discussed and agreed the 2024 Plan Year activities and priorities in relation to TCFD reporting.
- As part of the investment strategy review, the Trustee received an update on developments in investment approaches to ESG and climate risk which can help passive equity and active credit investors demonstrate consideration of these risks and opportunities explicitly.

May 2024:

- Reviewed, updated and finalised the Plan's second TCFD report covering the Plan's activities over the year to 31 December 2023.

December 2024:

- The Trustee reviewed the updated position of the Plan relative to the TCFD metrics and targets that have been agreed. Following discussion, a number of actions were agreed (summarised below):
  - *It was agreed to pursue those managers that had not provided information on the proportion of companies that have set Science Based Targets as this feeds into the Plan's target.*
  - *It was agreed to encourage bond managers to continue engaging with companies that do not yet disclose information on GHG emissions – as data coverage is particularly low here.*
  - *The Trustee reaffirmed its portfolio alignment target.*
- The Trustee reviewed the Plan's existing climate scenario analysis. The Trustee concluded that it would not undertake new scenario analysis, on the basis that results would be unlikely to change materially. The Trustee had discussed the limitations around modelling and potential real-world impacts of climate change, to supplement the analysis that had been completed during 2022.

  It was agreed to update this modelling in 2025, in line with the requirement to conduct climate scenario analysis at least every three years.
- The Trustee discussed the annual TCFD requirements with the investment advisor and confirmed requirements had been met for 2024.
- The TCFD work to be carried out in 2025 was also discussed, and a plan for TCFD work in 2025 was agreed.

Strategy

Identification and assessment of climate-related risks and opportunities relevant to the Plan

The Plan faces risks and opportunities from both the physical effects of changes in the climate itself – for example, rising temperatures and more frequent storms or flooding – and from the effects of transitioning to a lower carbon economy to limit the extent of climate change – for example, government policies to restrict or discourage the use of fossil fuels, technological advances in renewable energy, and shifts in consumer demand towards "greener" products.

Many of these climate-related risks and opportunities could affect the value of the Plan's assets. Others could affect the sponsor and its ability to provide financial support to the Plan. Some may also affect the Plan's liabilities, for example through affecting members' life expectancy or the inflationary increases to pensions each year.

Climate change could therefore impact the Trustee's aim for the Plan to reach full funding on its target basis ("self-sufficiency"). This was considered in detail within the climate-scenario analysis undertaken by the Trustee.

Trustees must decide the short-, medium- and long-term time horizons that are relevant to their plan. It is up to trustees how they determine their time horizons for the purpose of identifying and assessing climate-related risks and opportunities.

The Trustee has selected the following time horizons for the Plan. In setting these, the Trustee has taken into account the membership profile and the timing of widely held future climate milestones.

Time horizons	Agreed period	Rationale
Short-term	3 years	In line with actuarial valuation cycle. This will likely coincide with consideration of significant changes to the investment strategy.
Medium-term	10 years	In line with the broad timeframe to reach full funding on the self-sufficiency basis – the period over which the Plan is expected to move to its low-risk investment strategy. Also broadly aligned (at the time this was originally set) with the period over which significant changes are needed to limit global warming to 1.5°C above pre-industrial levels (2030).
Long term	17 years	This reflects the approximate duration of the Plan's liabilities (at the time this was originally set). The Plan is projected to reach around 90% pensioner liabilities at this time, meaning the additional cost of insuring the Plan (relative to its self-sufficiency funding target) should be significantly reduced.

The Trustee reviews these time periods annually and following any material changes in the Plan's membership.

Overview of the climate-related risks and opportunities relevant to the Plan that the Trustee has identified

To identify risks and opportunities to the Plan, the Trustee receives training to understand how climate-change may affect pension schemes and investments. The Trustee has received advice from its advisers on how the investment strategy, funding position and sponsor may be affected by climate-related factors.

The Trustee uses a variety of tools to identify the key risks that the Trustee should focus on, including:

- **Climate-scenario analysis** – undertaking scenario analysis to consider how the Plan's assets and liabilities may be affected under a range of different climate scenarios and implications for the Plan's funding and investment strategies.
- **Assessing investments** – The Trustee, with support from GMIMCo and its advisers, will periodically consider its investment mandates in the context of climate-related risks and opportunities. The Trustee's investment adviser assesses the investment managers and reports findings to the Trustee. Manager assessments include consideration of climate practices, incorporation of climate-related factors into the investment processes and the effectiveness of the management of climate-related risks.
- Monitoring a range of **climate-related metrics** in relation to the Plan's assets (more detail in **Section 4 – Metrics and Targets**).

The Trustee has identified and assessed the risks and opportunities to the Plan within each of these time horizons, as summarised below. These risks and opportunities are considered in the following sections where we discuss further the Trustee's approach to investment, covenant and funding risks and opportunities.

	Key risks	*Key opportunities*
Short-term	**Exposure to climate-related investment risks may be highest while the Plan retains an allocation to growth assets**	**Climate-tilted equity funds aim to protect against transition risks and provide exposure to transition opportunities**
Medium-term	**Lower real returns due to climate change could increase the time to reach full funding on a "self-sufficiency" basis**	**Climate-aware credit mandates should increase the resilience of assets to climate risks**
Long-term	**Cost of buy-out may increase as insurers allow for climate-related risks in their pricing and reserving bases**	**Buy-out is expected to provide greater protection from climate risks for members' benefits**

The Plan has a low-risk investment strategy and is in a strong funding position on its long-term funding basis – the Trustee feels that the Plan is appropriately positioned taking these risks and time horizons into consideration. The Trustee has a framework to wind down its growth assets (ie equities, diversified growth funds and property) over time which will reduce exposure to assets which may be particularly susceptible to climate risks and ensure the strategy and funding level is more resilient to potential climate risks. Alongside this, the Trustee is considering how it might evolve its credit mandates to incorporate a more explicit climate focus in the guidelines.

Climate scenario analysis

Scenario analysis is a tool for examining and evaluating different ways in which the future may unfold. During 2022, the Trustee used scenario analysis to consider how climate change might affect the Plan's assets and liabilities, funding strategy, investment strategy and the sponsoring employer's covenant. In 2024, the Trustee reviewed whether any update to the analysis was needed, as required by regulation. It was concluded that the scenario analysis would not be re-run, as there had been no material changes to the Plan's circumstances or to the modelling available that would be expected to lead to a materially different outcome. The remainder of this section is therefore based on the modelling and results that were produced during 2022.

The Trustee used the climate scenario analysis to better understand the time horizons over which physical risks and transition risks could materialise and the potential sensitivity to these risks. It considered what the possible impacts of climate change could be over each of its chosen time horizons and whether its current funding and investment strategies are likely to be resilient against these risks (or able to take advantage of any opportunities).

When considering the possible impact of climate change, the Trustee sought to consider, via asset and liability modelling, the impact of three scenarios on the Plan. The Trustee chose these scenarios, after consultation with its advisers:

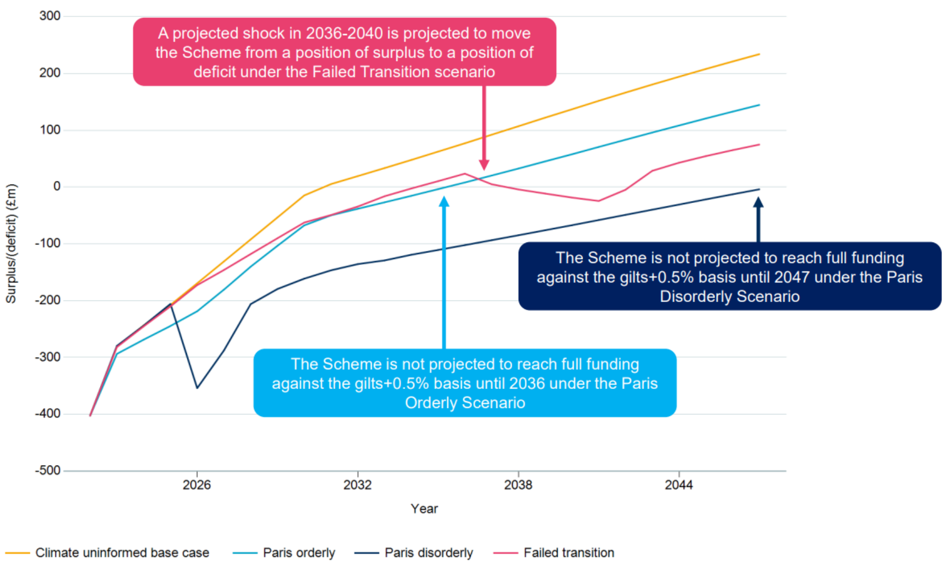
Scenario	Description	Why the Trustee chose it
Failed Transition	Global net zero carbon emissions not reached by 2050; only existing climate policies are implemented, and temperatures rise significantly.	To explore what could happen to the Plan's finances if carbon emissions continue at current levels and this results in significant physical risks from changes in the global climate that disrupt economic activity.
Orderly Net Zero by 2050	Global net zero carbon emissions is achieved by 2050; rapid and effective climate action (including using carbon capture and storage), with smooth market reaction.	To see how the Plan's finances could play out if global net zero carbon emissions is achieved by 2050, meaning that the economy makes a material shift towards low carbon by 2030.
Disorderly Net Zero by 2050	Same policy, climate and emissions outcomes as the Orderly Net Zero scenario, but financial markets are initially slow to react and then react abruptly.	To look at the risks and opportunities for the Plan if global net zero carbon emissions is achieved by 2050, but financial markets are volatile as they adjust to a low carbon economy.

To provide further insight, the Trustee also compared the outputs under each scenario to a "climate uninformed base case", which makes no allowance for either changing physical or transition risks in the future.

The results of the climate scenario analysis are fed into the risk management of the Plan through specific covenant, investment and funding focused considerations and the interaction of these. Further information on the results of the climate scenario analysis and modelling approach has been included in **Appendix 2**. The Trustee acknowledges that many alternative plausible scenarios exist but found these were a helpful set of scenarios to explore how climate change might affect the Plan in future.

Potential Plan impacts under the modelled scenarios – projected from 31 December 2021

The scenario analysis looked at the projected impact of the Plan's funding position over time on a long-term "self-sufficiency" funding target using a discount rate of gilts + 0.5% pa and the agreed de-risking investment strategy. The chart below illustrates the expected change in surplus under each of the three scenarios considered, as well as in the "climate uninformed" base case – projected from the 31 December 2021 expected position.



The current deficit is expected to reduce with the current investment strategy providing returns in excess of the liabilities. The Plan was expected to reach surplus on this gilts + 0.5% pa basis around 2031 at the time the analysis was undertaken.

If net zero is to be reached by 2050 in an orderly fashion, then there may be an adverse impact on the projected surplus. It would be expected to take around a further five years to reach full funding on the long-term basis, with most of that 'bad news' relative to the climate uninformed base case expected to emerge over the medium-term.

…and if the market reaction to the journey to Net Zero is disorderly, then the impacts could be more significant, delaying the journey to full funding by a further 11 years and also presenting a more volatile funding position in the short-term. Under this scenario, the Plan is still expected to reach full funding, but this is a long time into the future.

A failed transition would be expected to have significant impacts on the Plan in the longer-term, with a deficit expected to re-emerge in future years due to a delayed market shock. We note that the Plan may be able to de-risk before these impacts occur (for example, if it considers a buy-in).

The property investments may be susceptible to climate risks either through the transition to a low carbon economy or through the physical impacts of climate change. The market cap equities were also noted as significantly impacted by climate change with lesser, but still noticeable, impacts in bond markets.

The Trustee noted sharp difference in funding position between the climate uninformed baseline and the disorderly net zero projection in 2026 (noting this is an illustrative date) arises and reviewed the components of that difference.

Source: Ortec Finance. Impacts shown are medians, based on financial conditions as at 31 December 2021.

Potential Plan impacts under the modelled scenarios – projected from 31 December 2021 (cont.)

On the face of it, the results suggest that the Plan is relatively resilient to these different scenarios – expected to reach surplus on this basis in all three scenarios within the timeframes considered. This would occur around the same point under the Orderly Net Zero and Failed Transition scenarios. If there were a short-term market shock like that shown in the Disorderly Net Zero scenario, then this is expected to lead to a longer timeframe to reach surplus (without any change to the current funding and investment strategy).

It is noted that over the long-term, and particularly beyond the time horizon shown, the largest effects on the funding position would likely be felt under the Failed Transition scenario. The Trustee noted that the results suggest that the Plan is resilient in this scenario. This is partly because the Plan has a low-risk long-term investment strategy with limited exposure to growth assets. The Plan invests in a way that is designed to make it fairly immune to changes in interest rates and inflation in normal circumstances, which significantly reduces the volatility of its funding position. However, under climate scenarios with major economic disruption – such as the later years of the Failed Transition scenario – the Plan's interest rate and inflation protection may break down, leaving it more exposed to climate risks. The median modelled outcomes do not illustrate this possibility, but the Trustee has considered this risk.

Given the Plan's strong funding position on its long-term basis and its likely time horizon, the focus for the investment strategy is more on mitigating climate risks (by assessing and monitoring its current holdings) rather than looking to significantly reposition towards potential climate-related opportunities. Mitigating actions the Trustee considered were improving the resilience of the Plan's investments by switching to low-carbon equities (and an alternative scenario was presented to illustrate how effective this may be) and adding an explicit climate-aware objective to the corporate bond portfolios too.

Climate change impact on employer covenant

The Trustee has engaged its covenant advisor to assess the employer's covenant in 2023 – with the below observations following from that assessment.

The Trustee noted that the company is committed to operate its business in a more sustainable way and has set an ambitious target of becoming carbon neutral in products and operations by 2040. To achieve this, GM is targeting the elimination of all tailpipe emissions and will use renewable energy in all sites by 2035.

These targets are ahead several of its global peers and the Trustee also noted the significant scale of investment being made by the company into the development of new electric vehicle products across its brands and in manufacturing capacity both for EV and battery production.

The Trustee analysed third party ESG ratings from independent agencies to provide additional insight into the direction of travel over time.

The Trustee expects the automotive market to undergo a fundamental shift driven by EV and AV over the next decade and we view this to be the key risk to the longevity of the covenant beyond the medium-term (ie the next ten years). Compared with its traditional peers, the Trustee is satisfied that the company appears well positioned in its EV and AV developments.

The Plan has an investment de-risking strategy in place to move to a self-sufficiency strategy where there is limited reliance on the company covenant within a reasonable timeframe and is comfortable with the level of security offered by the overall covenant structure in place. The Trustee is therefore comfortable with the company covenant in respect of the impact of potential climate risks.

Risk Management

Processes for identifying and assessing climate-related risks

The Trustee has implemented a number of processes to enable it to identify, assess and manage climate-related risks and opportunities in relation to the Plan, and has integrated these within the overall risk management of the Plan. Below we set out some of the Trustee's processes in more detail.

Monitoring within the Plan's risk management framework

The Trustee maintains a risk register covering the wide range of risks applicable to the Plan. The Trustee updates the register regularly to include specific climate risks and expand on the climate aspects of existing risks. This helps to ensure that the Trustee manages these as part of their regular risk reviews.

Some potential impacts resulting from climate risks identified in the most recent review include:

- Higher cost of future buy-ins;
- Lower real investment returns due to climate change (both due to transition or physical risks); and
- Regulatory changes due to climate change affecting business models and asset prices.

The Trustee reviews these risks and opportunities periodically to ensure they are up-to-date and help identify emerging risks, to assess any significant priority risks and opportunities to manage/embrace and to ensure regular action is maintained in monitoring and mitigating these risks.

The Trustee's current assessment, based on consideration of their impact and likelihood, is that these climate-related risks present a medium-risk to the Plan, relative to other risks, and should continue to be monitored using existing monitoring processes.

The Trustee will consider the processes and governance framework it has in place for identifying, assessing and monitoring climate-related risks and opportunities on a periodic basis to ensure it remains appropriate and useful.

Monitoring climate-related metrics and Plan-specific targets

The metrics and targets that the Trustee uses to monitor climate-related risks and opportunities for the Plan are set out in **Section 4**. The Plan's exposures on these metrics are reviewed at least once a year, with progress against the targets also assessed and reported.

Monitoring investment managers' climate practices

GMIMCo and the Plan's investment adviser provide quarterly investment performance monitoring reports in respect of the Plan. Any concerns in relation to the investment managers are raised and monitored as part of this process.

The Trustee also receives and reviews information about its investment managers' responsible investment credentials, including climate change mitigation, periodically. This information is provided by the Plan's investment adviser, LCP, based on proprietary manager research carried out. The Plan's investment adviser and GMIMCo support the Trustee in conducting engagement with the managers, encouraging them to improve their practices further and report back to the Trustee.

The most recent review of managers' approach to climate and responsible investment report used a "traffic light" system to show the managers' RI capabilities against a range of different factors which included climate specific responses to LCP's 2022 Responsible Investment ("RI") Survey. The Trustee has requested an updated review of its managers in 2025, following completion of LCP's 2024 RI Survey.

The RI Survey provides a more detailed review of the climate credentials for the investment managers. These included factors such as:

- the use of climate tools to assess climate risks and opportunities (e.g., scenario modelling, metrics);
- commitments to climate goals (eg TCFD reporting, Net Zero targets);
- the quality and coverage of climate data provided; and
- evidence of stewardship and engagement on climate change – through participation in industry-wide collaborations.

Processes for identifying and assessing climate-related risks (cont.)

Monitoring investment managers' climate practices (cont.)

In addition, the report provides the investment adviser's manager specific ratings and any 'red flags' identified, based on the specialist asset class and climate knowledge of LCP's manager research teams.

The assessments provided key information on the actions taken by the managers to integrate good climate practices into the running of their firms. Based on this review, there were some follow-up actions in relation to areas LCP identified as red flags – which the Trustee requested were fed back directly the relevant managers. Overall, it was assessed that the Plan's managers take a reasonable approach to net zero and climate practices and the Trustee used the output of the reviews to drive climate-related conversations with its investment managers over the year.

The previous manager review also identified which managers had signed up to some of the most prominent industry-wide manager commitments – UK Stewardship Code 2020, Net Zero Asset Managers Initiative, Climate Action 100+, Institutional Investors Group on Climate Change and Global Investor Statement 2021. Four of the Plan's managers had not signed up to all of these, so the Trustee has engaged directly to understand the reasons behind this and encourage the managers to reconsider their position where appropriate (and progress has been made in this respect).

Monitoring advisers' climate practices

The Trustee also ensures its advisers have processes in place to help it understand its investment managers' climate-related practices, thereby helping it make informed judgements about its managers.

Similar expectations are set of GMIMCo, through its roles and responsibilities set out in the SIP, which supports the Trustee in making manager appointment decisions.

The Trustee has set strategic objectives for its investment adviser – which include some climate-related objectives. The Plan's investment adviser is assessed against these objectives regularly – and as part of the review in 2024 the Trustee was satisfied with LCP's performance as it related to supporting the Trustee in managing climate-related risks and identifying opportunities, as well as complying with statutory reporting aspects of this.

Investor engagement and Stewardship

The Trustee uses investor stewardship to help manage climate-related risks. Voting and engagement activities are delegated to the individual investment managers. The Trustee has set climate change as its stewardship priority.

Each manager has its own ESG policy, which includes assessment of climate-related risks and policies on voting on climate-related resolutions. In order to monitor how the individual investment managers are exercising their voting rights and undertaking engagement on behalf of the Trustee:

- GMIMCo periodically meet with the investment managers, to engage with them inter alia on how they have considered ESG issues (including climate change) within their stewardship activities and will seek to challenge the investment managers on these matters where they think this is in the best interests of members; and
- The investment adviser monitors the investment managers by receiving stewardship information on a regular basis and summarising this for consideration by the Investment Committee.

The Trustee has written to its investment managers regarding the Trustee's stewardship priorities, in line with the Department for Work and Pensions ("DWP') stewardship guidance. The Trustee has communicated to managers its expectations of them when they carry out responsible investment on the Plan's behalf.

Tools for identifying and assessing climate-related risks and opportunities

The Trustee has sought to identify and assess climate-related risks and opportunities facing the Plan arising from both the physical impacts of climate change and the transition to a low carbon economy. It has used the following main tools to do so:

- **Climate scenario analysis** was used to understand the macroeconomic impact of different climate scenarios on the Plan's finances and sponsor covenant (see **Section 2** and **Appendix 2** for further details).
- **Assessment of sponsor covenant** was used to identify the potential exposures of the sponsor covenant to both physical and transition risks from climate change. The covenant adviser also integrates climate considerations into its broader assessment of the employer' strength, putting climate risks into context of other covenant risks the Plan is exposed to.
- The Trustee's investment adviser helps the Trustee report the Plan's portfolio exposures to various **climate-related metrics**, as outlined above, which help illustrate the current exposure to certain climate transition risks (see **Section 4** for further details).
- The Trustee's investment adviser and GMIMCo, provide the Trustee with their opinions on the ESG and Responsible Investment approaches of the Plans' fund managers to help the Trustee make **manager assessments** of any shortcomings on both topics (see above for further details and the conversations which took place over the year).

These tools are used to identify the key risks that the Trustee should focus on. The Trustee assesses these risks as part of its investment decision-making processes and monitors them through its risk register to ensure all risks are being considered and managed consistently and proportionately.

These tools have helped the Trustee consider issues such as:

- Which climate change risks are most material to the Plan;
- How to take account of transition and physical risks; and
- How climate change affects the Trustee's risk appetite.

The Trustee also undertakes training to maintain and deepen its understanding of climate-related risks and opportunities and hence support its identification and assessment of those faced by the Plan. On an ongoing basis the use of these tools will help the Trustee to identify both current, but also new and emerging climate-related risks and opportunities.

How the Trustee manages the key risks and opportunities

Some examples of the measures to help manage climate-related risks and opportunities are outlined below:

- The Plan invests in a well-diversified investment strategy to help reduce exposure to risk generally, which also reduces the exposure to climate risks impacting any individual asset class.
- The Trustee has a policy to protect against a high proportion of the interest and inflation risks that impact the value of the Plan's liabilities. Therefore, any potential impact on interest rates and inflation from climate change (and indeed from other factors) are significantly mitigated.
- The Trustee, with the help of its investment consultant, engages with its investment managers on climate-related risks and opportunities when they meet. The Trustee encourages managers to improve their climate practices where possible.
- The Trustee factors climate-related metrics into its covenant monitoring, as provided by its covenant adviser.

The Trustee's chosen metrics

The Trustee has chosen four climate-related metrics to help it monitor climate-related risks and opportunities relevant to the Plan. These are listed below and reported on the following pages (as far as the Trustee was able to obtain the data). The data has been calculated using portfolio holdings at 31 March 2024 (unless otherwise stated).

Metric	High-level methodology
Absolute emissions: Total greenhouse gas emissions[1]	The sum of each company's most recent reported or estimated greenhouse gas emissions attributable to the Plan's investment in the company, where data is available. Emissions are attributed evenly across equity and debt investors. Reported in tonnes of CO_2 equivalent. This methodology was chosen because it is in line with the statutory guidance.
Emissions intensity: Carbon footprint	The total greenhouse gas emissions described above, divided by the value of the invested portfolio in £m, adjusted for data availability. Emissions are attributed evenly across equity and debt investors. Reported in tonnes of CO_2 equivalent per £1m invested. This methodology was chosen because it is in line with the statutory guidance.
Portfolio alignment: Science-based targets (SBT)	The proportion of the portfolio by weight of holdings with science-based targets to reduce their greenhouse gas emissions, demonstrated by a target validated by the Science Based Targets initiative (SBTi) or equivalent. This measures the extent to which the Plan's investments are aligned to the Paris Agreement goal of limiting global average temperature rises to 1.5°C. Reported in percentage terms. The Trustee chose this "binary target" measure because it is the simplest and most robust of the various portfolio alignment metrics available.
Additional climate change metric: Data quality	The proportion of the portfolio for which greenhouse gas emissions data is reported, estimated or unavailable. "Reported" emissions are reported by the emitting company but not verified. This approach was chosen because it is in line with the statutory guidance.

[1] More information about greenhouse gas emissions is provided in Appendix 1, including their classification into Scopes 1, 2 and 3.

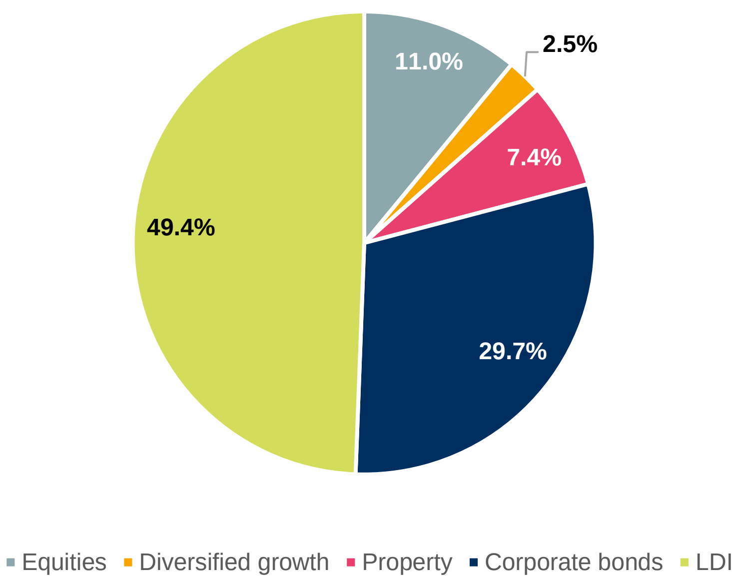
Further information about the methodologies used to calculate the metrics including: key judgements, assumptions, data inputs and treatment of data gaps is provided in **Appendix 3**.

The data has been calculated using portfolio holdings as at 31 March 2024, using data from the Plan's investment managers.

Metrics and Targets

Key data considerations

Plan asset allocation as at 31 March 2024



Where data coverage is less than 100% that is because managers have not shared data on those holdings. This may be because the company is not covered by the manager's research or because the company does not report the information.

Note: For the purposes of this asset breakdown, we have used the market value of long gilt exposure – some of which is accessed through derivatives – for the LDI asset value.

Scope 1 + 2 data coverage of around 84% of Plan assets
Scope 3 data coverage of around 81% of Plan assets

Asset class (% Plan assets)	Details of missing data or estimations
Equities (11%)	Data sourced from investment managers (last year: MSCI). Scope 1 + 2 emissions data for 7% of assets was estimated and 3% was unavailable. Around 19% of Scope 3 emissions data was estimated and 3% unavailable. *The Trustee considers this data availability acceptable. There has been a noticeable increase in availability of reported emissions (replacing previously estimated data).*
Diversified growth funds (3%)	No data available – in line with previous years. See **Appendix 3** for more details.
Property (7%)	Data sourced from investment managers. SBT data is not available for the property mandate. Scope 3 emissions data was unavailable for 36% of the portfolio. *The Trustee notes the challenges around data for this portfolio, but has taken a proportionate approach to encourage the manager to continue to develop its reporting (rather than use its own estimation techniques).*
Corporate bonds (30%)	Data sourced from investment managers (last year: MSCI). Scope 1 + 2 emissions data for approximately 2% of assets was estimated and 44% was unavailable. 12% of Scope 3 emissions data was estimated and 44% unavailable. *These numbers are an improvement from last year, however bond information continues to lag behind equities and is an area of focus.*
Government bonds and LDI (49%)	See **Appendix 3** for more details on how the Trustee has sourced this data.

Metrics and Targets

Metrics collected

The metrics collected at 31 March 2024 are shown below (with the corresponding 31 March 2023 figures in brackets). More information on the comparator figures can be found in last year's report. Values in green reflect where a metric has improved since last year, while values in red show where a metric has deteriorated. Metrics that have not materially changed are highlighted in amber.

Asset class	Valuation of Plan assets (£m)	Coverage		Total GHG emissions[1] (tCO2e)		Carbon footprint (tCO_2e per £m invested)		Data quality (% reported/ estimated/ unavailable)		Portfolio alignment	Data source	Date of portfolio value and holdings data
		Scopes 1 + 2	Scope 3	Scopes 1 + 2	Scope 3	Scopes 1 + 2	Scope 3	Scopes 1 + 2	Scope 3	Proportion with SBT		
Listed equities	**298** (287)	**97%** (96%)	**96%** (96%)	**33,125** (29,702)	**184,389** (181,745)	**114** (108)	**638** (658)	**90 / 7 / 3** (80 / 16 / 4)	**77 / 19 / 3** (0 / 96 / 4)	**41%** (32%)	Investment Managers (MSCI[2])	31/03/2024 (31/03/2023)
Diversified Growth Fund	**67** (61)	**-** (-)	**-** (-)	**n/a** (n/a)	**n/a** (n/a)	**n/a** (n/a)	**n/a** (n/a)	**n/a** (n/a)	**n/a** (n/a)	**n/a** (n/a)	n/a (n/a)	n/a (n/a)
Property[3]	**202** (215)	**100%** (35%)	**64%** (56%)	**36** (78)	**1,423** (2,867)	**1** (1)	**8** (22)	**100 / 0 / 0** (35 / 0 / 65)	**(64 / 0 / 36)** (56 / 0 / 44)	**n/a** (n/a)	Investment Managers (Investment Managers)	31/03/2024 (31/03/2023)
Corporate bonds	**805** (763)	**56%** (48%)	**56%** (48%)	**31,627** (22,509)	**237,709** (162,639)	**70** (61)	**527** (444)	**54 / 2 / 44** (44 / 5 / 52)	**44 / 12 / 44** (0 / 48 / 52)	**35%** (30%)	Investment Managers (MSCI[2])	31/03/2024 (31/03/2023)
Government bonds and LDI[4]	**1,339[5]** (1,410)	**100%** (100%)	**100%** (100%)	**227,098** (191,540)	**181,711** (120,528)	**170** (136)	**136** (86)	**100 / 0 / 0** (100 / 0 / 0)	**100 / 0 / 0** (100 / 0 / 0)	**100%[6]** (100%)	LCP (LCP)	31/03/2024 (31/03/2023)

Source: Investment managers, LCP. Figures may not sum due to rounding. Note we have only included invested assets and have excluded monies held in cash accounts. Metric data for the synthetic holdings are based on the exposure, not the market value.

[1] Figures relate only to the assets for which data is available. Total emissions are for the Plan's assets.

[2] Certain data ©2024 MSCI ESG Research LLC. Reported by permission. See **Appendix 3** for more details, including how to interpret data where coverage is less than 100%.

[3] The emissions figures relating to electricity use are market-based, ie calculated using the emissions intensity of the electricity the landlord / tenant has chosen to acquire. For the property mandate, the majority of emissions are "tenant controlled" so they are classed as Scope 3 emissions. The Scope 1 and 2 emissions for the property portfolio therefore look low compared to other asset classes.

[4] A different emissions intensity metric has been calculated for gilts instead of carbon footprint, so neither this nor total GHG emissions can be compared with the other emissions figures shown.

[5] Market value of long gilt exposure - some of which is accessed through derivatives.

[6] The UK has a net zero by 2050 target written into law, with carbon budgets based on advice from the independent Committee on Climate Change, so UK government bond exposure has been treated as having a credible science-based target.

Metrics and Targets

Metrics collected (cont.)

Conclusions from the metrics collected

The Trustee analyses the collected metrics to identify and assess climate-related risks and opportunities to the Plan – which it does at a more granular (mandate) level. This more granular assessment complements the climate scenario analysis carried out by the Trustee, enabling the Trustee to focus its climate risk management on the areas of the portfolio which are expected to be most exposed to climate change.

Whilst there is a requirement to collect and report on total greenhouse gas emissions, the Trustee notes this may not be a good indication of climate risk exposure for certain asset classes. The Trustee has therefore focussed on the intensity and SBT metrics when drawing conclusions from the metrics collected.

The Trustee noted that data quality has improved compared to last year. However, both the GHG emissions and the carbon footprint metric have worsened for the equities, corporate bonds and LDI portfolios. The Trustee noted that further improvement in a number of areas is required, and that there will not necessarily be a linear trajectory of improvement from here.

Below are some of the conclusions and recommendations agreed (with differing degrees of priority allocated in accordance with the Trustee's view of the importance):

- **Listed equities:**
  - *Overall, the carbon emissions data quality and proportion of holdings with SBT have improved since last year. However, at the overall level reported emissions are slightly higher than last year. Carbon footprint for scopes 1 & 2 is slightly higher, but for scope 3 is lower than previously reported.*
  - It was agreed to engage with one manager to request information on SBT. The managers have been notified that the Plan has set a target for this and will be reminded that this is a priority.
  - The Trustee chose to pursue some mandates which had a relatively high carbon footprint (in particular Scope 1 & 2) compared to the other listed equity mandates. For example, it was identified that the Plan's emerging markets equities mandate had a relatively high carbon footprint (and low SBT level).
- **Corporate bonds:**
  - *Overall, it was noted that data quality is generally lower than for listed equities, but carbon emissions data quality has improved over the year. It was pleasing to see the material increase in the proportion of the portfolio that is invested in companies with a validated science-based target.*
  - Trustee agreed to encourage managers to engage with portfolio companies that do not yet disclose information on GHG emissions with the aim of accelerating the improvement in the market-wide level of data coverage.
  - It was also agreed to engage with one manager lagging behind others (and the wider market) in terms of the proportion of companies invested in line with SBTs. It was agreed to focus on this as part of next year's updated review of managers' climate approaches.

Targets

The Trustee has set the following targets.

Target	Coverage	Baseline reference date
45% of listed equity investments to have set SBT by 31 March 2025	The Plan's listed equities (currently c11% of assets)	31 March 2022
45% of corporate bond investments to have set SBT by 31 March 2025	The Plan's corporate bonds (currently c30% of assets)	31 March 2022

The Trustee chose to target the portfolio alignment metric as it is forward-looking and focussed on the transition that needs to occur in the future in order to achieve net zero aims globally.

Achieving the above target will improve the Plan's assets' alignment with a 1.5°C pathway which is expected to help manage climate-related risks to the Plan by:

1. Reducing exposure to climate transition risks in the shorter-term by keeping up with/slightly ahead of a general market trend; and
2. Supporting collective action to meet the Paris Agreement goals, hence reducing longer-term systemic risks from the physical effects of climate change.

Progress against the target

The climate reporting carried out for the Plan during the year included an assessment of the current alignment with the target. Broadly 41% of the listed equity (last year 32%) and 35% of the corporate bond investments (last year 30%) had set SBT targets as at 31 March 2024, based on manager data on SBT-validated targets. The Trustee assumes that no other portfolio companies have set science-based targets.

This represents an increase from the reference levels observed in March 2022.

For the equity portfolio the Plan is slightly ahead of its target, based on a linear increase in SBT each year to the 31 March 2025 target date. For the corporate bond portfolio, the Plan is slightly behind its target, also based on a linear increase in SBT each year to the 31 March 2025 target date.

The Trustee reviewed the suitability of its target in 2024. Given that the target had only been set in 2022, and steady initial progress has been seen against it, the Trustee decided to retain its current target. In line with DWP requirements, the Trustee will continue to review the target annually.

The Trustee has agreed that when the target is reviewed in 2025, it will focus on the lower than anticipated alignment in the corporate bond portfolio.

Source: Investment managers, LCP.

Metrics and Targets

Targets (cont.)

The following steps are being taken to achieve the target:

The Trustee, with help from GMIMCo and its investment adviser, has communicated its SBT target to each relevant investment manager.

Following the review of progress over 2024 against target, it was agreed to engage with the corporate bond managers regarding their expectations for future development of SBT exposure within the mandates. This will be important to help inform the Trustee's decision as to the ongoing suitability of the target itself (which will need to be re-set in 2025), but also to feed into future considerations for the development of those mandates.

Investment managers are routinely contacted by GMIMCo and the Trustee's advisers as part of the monitoring processes. Where appropriate, they will ask managers to discuss progress towards improving the proportion of portfolio companies with SBT-validated targets.

The investment adviser encourages managers to support the goal of net zero emissions by 2050 or earlier and has published its expectations for investment managers in relation to net zero. This includes the use of effective voting (where applicable) and engagement with portfolio companies to encourage achievement of net zero. The investment consultant continues to engage with managers on this topic and will encourage them to use their influence with portfolio companies to increase the use of SBT.

It was agreed that the Trustee will review progress towards the target each year and consider whether additional steps are needed to increase its chance of meeting the target.

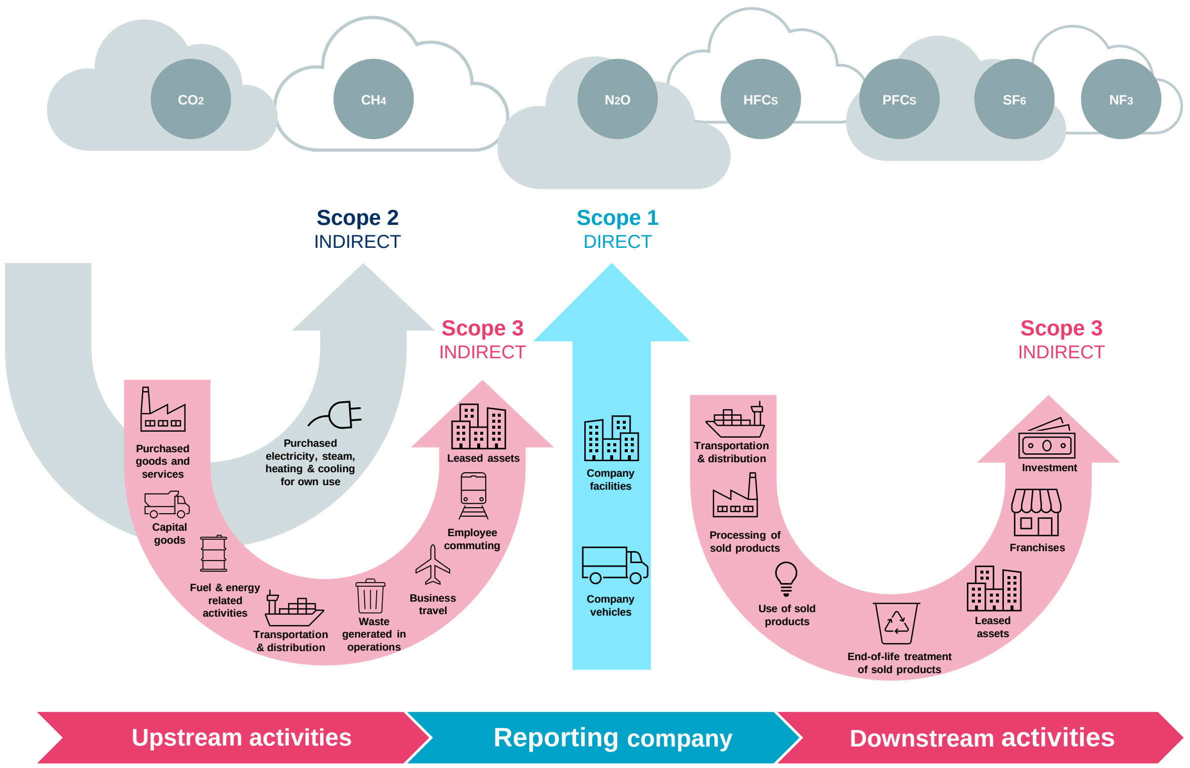
Appendices

Appendix 1 – Greenhouse gas emissions explained

Within the ‘metrics and targets’ section of the report, the emissions metrics relate to seven greenhouse gases – carbon dioxide (CO_2), methane (CH_4), nitrous oxide (N_2O), hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), sulphur hexafluoride (SF_6) and nitrogen trifluoride (NF_3). The figures are shown as “CO_2 equivalent” (CO_2e) which is the amount of carbon dioxide that would be equivalent to the excess energy being stored by, and heating, the earth due to the presence in the atmosphere of these seven greenhouse gases.

The metrics related to greenhouse gas emissions are split into the following three categories: Scope 1, 2 and 3. These categories describe how directly the emissions are related to an entity’s operations. Scope 3 emissions often form the largest share of an entity’s total emissions, but are also the ones that the entity has least control over.

- **Scope 1** greenhouse gas emissions are all direct emissions from the activities of an entity or activities under its control.
- **Scope 2** greenhouse gas emissions are indirect emissions from energy purchased and used by an entity.
- **Scope 3** greenhouse gas emissions are all indirect emissions from activities of the entity, other than scope 2 emissions, which occur from sources that the entity does not directly control.



Source: GHG Protocol

Appendix 2 – Climate scenario analysis

Scenarios considered and why the Trustee chose them

The Trustee carried out climate scenario analysis as at 31 December 2021 with the support of their investment consultants, LCP. The analysis looked at three possible scenarios:

Transition	Description	Why the Trustee chose it
Failed Transition	Global net zero carbon emissions not reached by 2050; only existing climate policies are implemented and temperatures rise significantly.	To explore what could happen to the Plan's finances if carbon emissions continue at current levels and this results in significant physical risks from changes in the global climate that disrupt economic activity.
Orderly Net Zero by 2050	Global net zero carbon emissions is achieved by 2050; rapid and effective climate action (including using carbon capture and storage), with smooth market reaction.	To see how the Plan's finances could play out if global net zero carbon emissions are achieved by 2050, meaning that the economy makes a material shift towards low carbon by 2030.
Disorderly Net Zero by 2050	Same policy, climate and emissions outcomes as the Orderly Net Zero scenario, but financial markets are initially slow to react and then react abruptly.	To look at the risks and opportunities for the Plan if global net zero carbon emissions is achieved by 2050, but financial markets are volatile as they adjust to a low carbon economy.

The Trustee acknowledges that many alternative plausible scenarios exist, but found these were a helpful set of scenarios to explore how climate change might affect the Plan in future.

The intricacies of climate systems present considerable difficulties in modelling the impacts on pension schemes' assets and liabilities. This is particularly true in the Failed Transition scenario where over 4°C of warming is observed. Due to the unprecedented nature of such warming, it is challenging to encompass all potential consequences within the modelling process. Simplifications in the modelling, such as not allowing for tipping points, mean the actual impact on pension schemes is likely to be more significant than is currently being modelled. As long as these limitations are understood, the scenarios still provide valuable insights to inform climate risk assessment and management.

To provide further insight, the Trustee also compared the outputs under each scenario to a "climate uninformed base case", that makes no allowance for either changing physical or transition risks in future.

The scenarios' key features are summarised on **page 30**.

Appendix 2 – Climate scenario analysis (cont.)

The climate scenarios considered by the Trustee

Scenarios as at 31 December 2021 – key features

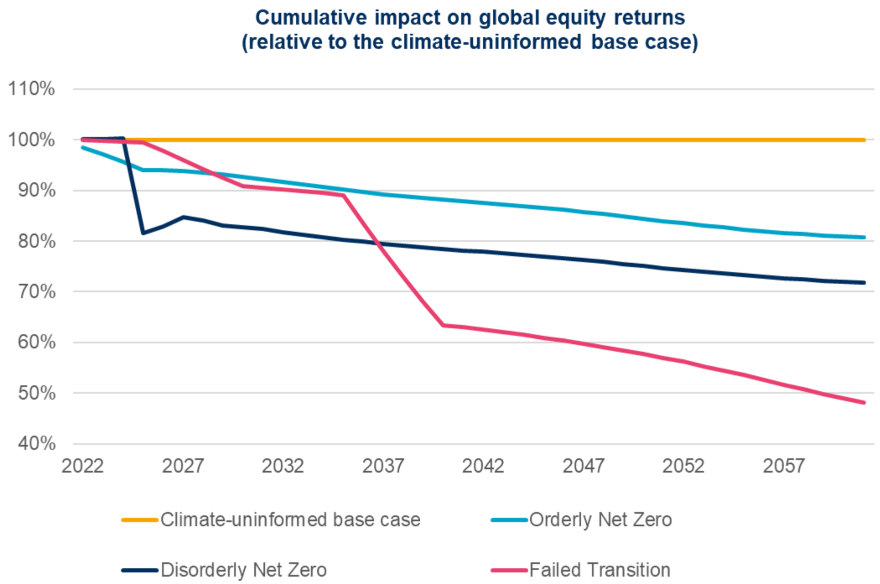
<table>
<tr><th>Scenarios:</th><th>Failed Transition</th><th>Orderly Net Zero by 2050</th><th>Disorderly Net Zero by 2050</th></tr>
<tr><td>Low carbon policies</td><td>Continuation of current low carbon policies and technology trends.</td><td colspan="2">Ambitious low carbon policies, high investment in low-carbon technologies and substitution away from fossil fuels to cleaner energy sources and biofuel.</td></tr>
<tr><td>Paris Agreement outcome</td><td>Paris Agreement goals not met.</td><td colspan="2">Global net zero achieved by 2050; Paris Agreement goals met.</td></tr>
<tr><td>Global warming</td><td>Average global warming is about 2°C by 2050 and 4°C by 2100, compared to pre-industrial levels.</td><td colspan="2">Average global warming stabilises at around 1.5°C above pre-industrial levels.</td></tr>
<tr><td>Physical impacts</td><td>Severe physical impacts.</td><td colspan="2">Moderate physical impacts.</td></tr>
<tr><td>Impact on GDP</td><td>Global GDP is significantly lower than the climate-uninformed scenario in 2100.
For example, UK GDP in 2100 predicted to be 50% lower than in the climate uninformed scenario.</td><td>Global GDP is lower than the climate-uninformed scenario in 2100.
For example, UK GDP in 2100 predicted to be about 5% lower than in the climate-uninformed scenario.</td><td>In the long term, global GDP is slightly worse than in the Orderly Net Zero scenario due to the impacts of financial markets volatility.</td></tr>
<tr><td>Financial market impacts</td><td>Physical risks priced in over the period 2026-2030. A second repricing occurs in the period 2036-2040 as investors factor in the severe physical risks.</td><td>Transition and physical risks priced in smoothly over the period of 2022-2025.</td><td>Abrupt repricing of assets causes financial market volatility in 2025.</td></tr>
</table>

Source: Ortec Finance. Figures quoted are medians.

Appendix 2 – Climate scenario analysis (cont.)

The climate scenarios considered by the Trustee

These scenarios show that equity markets could be significantly impacted by climate change, as shown in the chart below, with lesser but still noticeable impacts in bond markets. All three scenarios envisage, on average, lower investment returns and these result in a worse funding position.



Over the long-term, and particularly beyond the time horizon modelled, the largest effects would be felt under the Failed Transition scenario. On the face of it, the results below suggest that the Plan is resilient in this scenario. This is partly because in the modelling the Plan is assumed to reach its low-risk long-term investment strategy by around 2030, after which it has very little exposure to growth assets such as equities which are expected to be most severely affected by climate change. Moreover, the Plan invests in a way that is designed to make it fairly immune to changes in interest rates and inflation in normal circumstances, which significantly reduces the volatility of its funding position. However, under climate scenarios with major economic disruption – such as the later years of the Failed Transition scenario – the Plan's interest rate and inflation protection may break down, leaving it more exposed to climate risks. The median modelled outcomes do not illustrate this possibility, but the Trustee has considered this risk.

Source: Ortec Finance. Impacts shown are medians, based on financial conditions as at 31 December 2021.

Appendix 2 – Climate scenario analysis (cont.)

Modelling approach

- The scenario analysis is based on a model developed by Ortec Finance and Cambridge Econometrics. The outputs were then applied to the Plan's assets and liabilities by LCP.
- The three climate scenarios are projected year by year, over the next 40 years.
- The results are intended to help the Trustee to consider how resilient the funding strategy and investment strategy are to climate-related risks.
- The Trustee discussed how future planned changes to the investment strategies would change the analysis.
- The three climate scenarios chosen are intended to be plausible narratives of how the future could unfold. They are only three scenarios out of countless others which could have been considered. Other scenarios could give better or worse outcomes for the Plan.
- The results discussed in this report have been based on macro-economic data at 30 June and 31 December for data supplied by Cambridge Econometrics and Ortec Finance respectively, calibrated to market conditions at 31 December 2021.
- For more information about the modelling approach, see **page 32**.

Modelling limitations

- As this is a "top-down" approach, investment market impacts were modelled as the average projected impacts for each asset class. This contrasts with a "bottom up" approach that would model the impact on each individual investment held by the Plan's investment portfolio. As such, the modelling does not require extensive scheme-specific data and so the Trustee was able to consider the potential impacts of the three climate scenarios for all of the Plans' assets.
- In practice, the Plan's investments may not experience climate impacts in line with the market average.
- The asset and liability projections shown reflect the Plan's current strategic journey plan. No allowance is made for changes that might be made to the funding or investment strategy as the climate pathways unfold, nor for action to be taken in response to the Plan achieving its long-term funding target.
- Like most modelling of this type, the modelling does not allow for all potential climate-related impacts and therefore is quite likely to underestimate some climate-related risks. For example, tipping points (which could cause runaway physical climate impacts) are not modelled and no allowance is made for knock-on effects, such as climate-related migration and conflicts.
- In addition, the model presumes that the UK government and bank counterparties will remain solvent, thereby making no allowance for credit risk on government bonds and derivative exposures. However, in a scenario where global warming exceeds 4ºC, this assumption may no longer be valid.
- Medians from Ortec Finance's model outputs are used to project forward assets and liabilities, which means the results reflect the model's "middle outcomes" for investment markets under the three scenarios. Allowing for market volatility would result in better or worse model outputs than shown. Investment markets may be more volatile in future as a result of physical and transition risks from climate change, and this is not illustrated in the modelling shown.

Appendix 2 – Climate scenario analysis (cont.)

Potential impact of climate change on life expectancy

If a member lives longer, the Plan pays the member's pension for longer and therefore needs more assets to make the payments.

Like the economic impacts, the impact of climate change on life expectancy is highly uncertain. As part of the discussions on the climate scenario analysis, the Trustee considered the various possible drivers for changes in mortality rates with both positive and negative impacts expected in each of the scenarios considered.

For example, in the Orderly Net Zero by 2050 scenario, the reduced use of fossil fuels should lead to lower air pollution, increasing life expectancy. But this effect could be countered by economic prosperity generally being lower in this scenario, and this may limit the funding available for healthcare.

Given the level of uncertainty, the Trustee noted that no specific allowance has currently been made in the scenario analysis, but that it would keep up to date on developments in this area and consider it further at the next actuarial valuation.

Potential impact of climate change on long term funding objective (insuring the Plan)

The Trustee also discussed the possible impact of climate change on their long term funding target. In particular, how climate change risks could affect insurer pricing for securing pension benefits. A change in insurer pricing levels could have a significant impact on when it will be feasible to secure benefits with an insurer. Future insurance pricing is inherently uncertain, so the Trustee will continue to monitor it, especially as they get closer to a possible transaction.

The main influence of the climate scenario analysis was to highlight that the sooner the Plan can implement an insurance transaction to cover the whole Plan membership, the less likely climate change risks would result in members not receiving their full benefits. This is because of the additional regulatory protections that apply to insurance policies. The Trustee noted that climate change increases the chance that these regulatory protections are insufficient, particularly in higher warming scenarios such as the Failed Transition.

Appendix 2 – Climate scenario analysis (cont.)

Modelling approach – more details

- The scenario analysis is based on the ClimateMAPS model developed by Ortec Finance and Cambridge Econometrics, and was then applied to the Plan's assets and liabilities by LCP. The three climate scenarios were projected year by year, over the next 40 years.
- ClimateMAPS uses a top-down approach that consistently models climate impacts on both assets and liabilities, enabling the resilience of the Plan's funding strategy to be considered. The model output is supported by in-depth narratives that bring the scenarios to life to help the Trustee's understanding of climate-related risks and opportunities.
- ClimateMAPS uses Cambridge Econometrics' macroeconomic model which integrates a range of social and environmental processes, including carbon emissions and the energy transition. It is one of the most comprehensive models of the global economy and is widely used for policy assessment, forecasting and research purposes. The outputs from this macroeconomic modelling – primarily the impacts on country/regional GDP – are then translated into impacts on financial markets by Ortec Finance using assumed relationships between the macroeconomic and financial parameters.
- Ortec Finance runs the projections many times using stochastic modelling to illustrate the wide range of climate impacts that may be possible, under each scenario's climate pathway. LCP takes the median (ie the middle outcome) of this range of impacts, for each relevant financial parameter, and adjusts it to improve its alignment with LCP's standard financial assumptions.
- LCP then uses these adjusted median impacts to project the assets and liabilities of the Plan to illustrate how the different scenarios could affect its funding level. The modelling summarised in this report used scenarios based on the latest scientific and macro-economic data at 30 June 2021, calibrated to market conditions at 31 December 2021.
- The modelling included contributions which were assumed to be paid in line with the Schedule of Contributions as at the date of modelling until 31 December 2022 – with no further contributions accounted for beyond this point. The Trustee discussed how future planned changes to the investment strategies would change the analysis. No allowance was made for changes to he investment strategy or contributions in response to the climate impacts modelled.
- As this is a "top-down" approach, investment market impacts were modelled as the average projected impacts for each asset class, ie assuming that the Plan's investments are affected by climate risk in line with the market-average portfolio for the asset class. This contrasts with a "bottom up" approach that would model the impact on each individual investment held in the Plan's investment portfolio. As such, it does not require extensive scheme-specific data and so the Trustee was able to consider the potential impacts of the three climate scenarios for all of the Plan's assets.
- In practice, the Plan's investment portfolio may not experience climate impacts in line with the market average. The Trustee considers, on an ongoing basis, how the Plan's climate risk exposure differs from the market average using climate metrics (which are compared with an appropriate market benchmark) and its regular responsible investment reviews which consider the investment managers' climate approaches.
- Uncertainty in climate modelling is inevitable. In this case, key areas of uncertainty relating to the financial impacts include how climate change might affect interest rates and inflation, and the timing of market responses to climate change. ClimateMAPS, like most modelling of this type, does not allow for all climate-related impacts and therefore, in aggregate, is quite likely to underestimate the potential impacts of climate-related risks, especially for the Failed Transition scenario. For example, tipping points (which could cause runaway physical climate impacts) are not modelled and no allowance is made for knock-on effects, such as climate-related migration and conflicts.

Appendix 3 – Further information on climate-related metrics

1. Listed equities and corporate bonds

Notes for data sourced from MSCI (2023 figures, shown on page 21)

Emissions are attributed to investors using "enterprise value including cash" (ie EVIC, the value of equity plus outstanding debt plus cash).

The total GHG emissions figures omit any companies for which data was not available. For example, if the portfolio was worth £200m and emissions data was available for 70% of the portfolio by value, the total GHG emissions figure shown relates to £140m of assets and the portfolio's carbon footprint equals total GHG emissions divided by 140. In other words, no assumption is made about the emissions for companies without data.

The science-based targets metric equals the % of portfolio by weight of companies that have a near-term carbon emissions reduction target that has been validated by the Science Based Targets initiative (SBTi). The MSCI database does not distinguish between companies which do not have an SBTi target and companies for which MSCI does not check the SBTi status, so the coverage for this metric is equal to the % of the portfolio with an SBTI target.

Emissions data coverage and quality

Where coverage of the portfolio analysed is less than 100%, this is because the MSCI database:

- Does not cover some holdings (eg cash, sovereign bonds, bonds that have recently matured, shares in companies no longer listed when the analysis was undertaken);
- Does not hold emissions data for some portfolio companies because the company does not report it and MSCI does not estimate it; and/or
- Does not hold EVIC data for some portfolio companies, so emissions cannot be attributed between equity and debt investors.

The last of these reasons is usually the main explanation for the fairly low coverage of bond portfolios.

The MSCI database records whether emissions data is reported or estimated, and which estimation method has been used, but not whether companies' reported emissions have been independently verified. Our investment consultant has asked MSCI to introduce this distinction. Where emissions data is estimated, MSCI uses one of three methods.

- For electric utilities, MSCI's estimate of Scope 1 emissions is of direct emissions due to power generation, calculated using power generation fuel-mix data.
- For companies not involved in power generation, which have previously reported emissions data, MSCI starts with a company-specific carbon intensity model.
- For other companies, MSCI uses an industry segment-specific carbon intensity model, which is based on the estimated carbon intensities for 1,000+ industry segments.

For Scope 3 emissions, we have chosen to use MSCI's estimated emissions even where reported emissions are available. This provides greater consistency than using a mixture of reported and estimated emissions. Analysis of reported Scope 3 emissions suggests that the data quality is currently low: data is volatile and often out of date, with relatively few companies reporting on all types of Scope 3 emissions. In contrast, MSCI estimates all types of Scope 3 emissions for most companies in its database, for a recent reporting year and using a consistent approach.

MSCI is a leading provider of climate-related data, so we would expect the coverage to compare favourably with other data sources. Our investment consultant is engaging with MSCI to encourage them to improve EVIC coverage for debt issuers and to distinguish between companies which do not have an SBTi target and companies for which it does not check the SBTi status.

Appendix 3 – Further information on climate-related metrics (cont.)

2. UK government bonds and LDI

GHG emissions for government bonds (gilts) are calculated on a different basis from the other asset classes, so cannot be compared with the other emissions figures shown.

The emissions figures were calculated by the Trustee’s investment adviser using publicly available data sources. As suggested in the statutory guidance, Scope 1+2 emissions have been interpreted as the production-based emissions of the country.

In line with guidance from the Partnership for Carbon Accounting Financials (PCAF) issued in December 2022, emissions intensity has been calculated as:

$$\frac{UK\ GHG\ emissions}{PPP - adjusted\ GDP\ for\ the\ UK}.$$

GHG emissions have then been calculated as: $Emissions\ intensity\ x\ value\ of\ the\ Scheme's\ investment\ in\ gilts.$

For the LDI mandate, derivatives have been treated as an investment in an equivalent gilt. Greenhouse gas emissions have been calculated for the gilt exposure (including the repo loan amount) but not the swap positions. This is in line with the Trustee’s understanding of the typical interpretation of the DWP guidance by investment managers and consultancies as not requiring estimation of emissions for swap exposures at this time.

Key data considerations

The Trustee has aimed to report on all the Plan's assets, including liability driven investments ("LDI") which form the largest holdings of the Plan's assets.

Some emissions data was available for mandates comprising 84% of the value of the total Plan's assets as at 31 March 2024.

For listed equities, corporate bonds and property, data was sourced from the investment managers. Data coverage has improved since last year, where data was sourced from MSCI for equities and corporate bonds. The Trustee attributes this increase primarily to an industry-wide trend of improved climate reporting, rather than due to the change in data provider.

The Plan's diversified growth fund mandate was unable to provide emissions or SBT data, due to the nature of the portfolio. The Trustee has agreed to omit the portfolio from the reporting metrics as exposures are primarily gained through derivatives. Currently there is no established method to provide climate data for derivatives.

Most of the Plan's investment managers are seeking to improve their climate-related reporting by increasing the number of metrics they report and seeking to fill the data gaps. The Trustee therefore expects data coverage and quality to improve over time. The Trustee (supported by GMIMCo and the investment adviser) is encouraging these investment managers to increase, where possible, their collection and reporting of metrics (in particular coverage of SBT data).

As data is incomplete, the total greenhouse gas emissions will be understated. This metric may increase in future years as more data becomes available.

Scope 3 emissions data is shown separately from Scopes 1+2, in line with the statutory guidance. This is good practice because Scope 3 data is much larger on average, so dominates combined carbon emissions data, but is also generally less reliable in terms of the quality of data being reliant on estimation.

Appendix 4 – Principles for Effective Disclosure

The Trustee has aimed to follow the Principles for Effective Disclosure (as set out in the statutory guidance) when drafting this report.

1	Disclosures should present relevant information specific to the potential impact of climate-related risks and opportunities on the plan avoiding generic or boilerplate disclosures that do not add value to members' understanding of issues.
2	Disclosures should be specific and sufficiently complete to provide a thorough overview of the Plan's exposure to potential climate-related impacts and the Trustee's governance, strategy and processes for managing climate-related risks and opportunities.
3	Disclosures should be clear and understandable showing an appropriate balance between qualitative and quantitative information.
4	Disclosures should be consistent over time to enable plan members to understand the development and/or evolution of the impact of climate-related issues on the plan.
5	Disclosures should ideally be comparable with other pension funds of a similar size and type.
6	Disclosures should be reliable, verifiable, and objective.
7	Disclosures should be provided on a timely basis. The TCFD recommends annual disclosures for organisations.